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NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 FEB 25 CA/CAPLUS - Russian Agency for Patents and Trademarks
(ROSPATENT) added to list of core patent offices covered
NEWS 4 FEB 28 PATDPAFULL - New display fields provide for legal status
data from INPADOC
NEWS 5 FEB 28 BABS - Current-awareness alerts (SDIs) available
NEWS 6 FEB 28 MEDLINE/LMEDLINE reloaded
NEWS 7 MAR 02 GBFULL: New full-text patent database on STN
NEWS 8 MAR 03 REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS 9 MAR 03 MEDLINE file segment of TOXCENTER reloaded
NEWS 10 MAR 22 KOREAPAT now updated monthly; patent information enhanced
NEWS 11 MAR 22 Original IDE display format returns to REGISTRY/ZREGISTRY
NEWS 12 MAR 22 PATDPASPC - New patent database available
NEWS 13 MAR 22 REGISTRY/ZREGISTRY enhanced with experimental property tags
NEWS 14 APR 04 EPFULL enhanced with additional patent information and new
fields
NEWS 15 APR 04 EMBASE - Database reloaded and enhanced
NEWS 16 APR 18 New CAS Information Use Policies available online
NEWS 17 APR 25 Patent searching, including current-awareness alerts (SDIs),
based on application date in CA/CAPLUS and USPATFULL/USPAT2
may be affected by a change in filing date for U.S.
applications.

NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

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* * * * * STN Columbus * * * * *

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FILE LAST UPDATED: 26 Apr 2005 (20050426/ED)

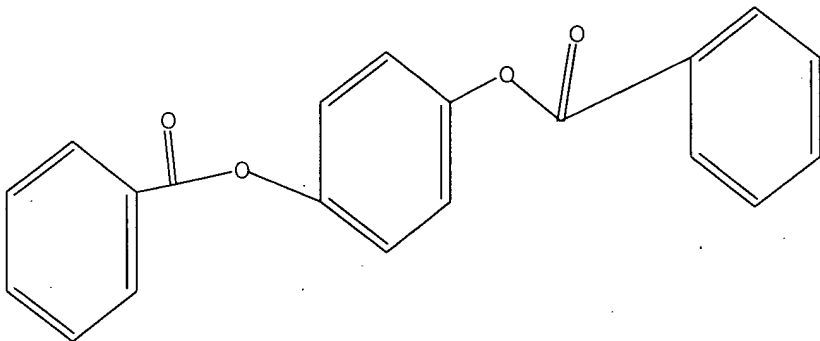
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=>
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L1 STRUCTURE UPLOADED

=> d
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 11

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

SAMPLE SEARCH INITIATED 13:34:05 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 2329 TO ITERATE

42.9% PROCESSED 1000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

50 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 43686 TO 49474
PROJECTED ANSWERS: 4459 TO 6439

L2 50 SEA SSS SAM L1

L3 50 L2

=> s 13 and py<2001
20649792 PY<2001

L4 27 L3 AND PY<2001

=> s 14 and polymeri?
533865 POLYMERI?

L5 19 L4 AND POLYMERI?

=> s 14 and amino?
1391600 AMINO?

L6 2 L4 AND AMINO?

=> s 15 or 16
L7 21 L5 OR L6

=> d 1-21 ibib abs hitstr

L7 ANSWER 1 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:755292 CAPLUS

DOCUMENT NUMBER: 133:323006

TITLE: Thermostable, liquid-crystalline pigments, films,
pearlescent coatings and **polymerizable**
mixtures for their preparation

INVENTOR(S): Kasch, Michael; Kupfer, Jorgen; Kreuzer,
Franz-Heinrich

PATENT ASSIGNEE(S): Consortium fuer Elektrochemische Industrie G.m.b.H.,
Germany

SOURCE: Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1046692	A1	20001025	EP 2000-106099	20000330 <--
EP 1046692	B1	20020807		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19917067	A1	20001019	DE 1999-19917067	19990415 <--
DE 19922158	A1	20001116	DE 1999-19922158	19990512 <--
PRIORITY APPLN. INFO.:			DE 1999-19917067	A 19990415
			DE 1999-19922158	A 19990512

AB Mixts. of **polymerizable** liquid-crystalline substances with chiral phase
and ≥90% of the compds. having ≥2 **polymerizable**
groups, so that the **polymerizable** group content in the mixts. is
3.2-15 mol/g are useful for manufacture of heat-resistant, liquid-crystalline pigments
for pearlescent coatings. A typical pigment was manufactured by photopolymerization
of a mixture containing 23.93 g hydroquinone bis[4-(4-
acryloyloxybutoxy)benzoate], 6.6 g 4-acryloyloxyphenyl
4-(4-acryloyloxybutoxy)benzoate, 2.81 g 2-[4-(4-acryloyloxybutoxy)benzoyl]-
5-anisoylisosorbide, 10 mg Et3N, 0.09 g Ethanox 703, and 0.33 g Irgacure
819 as a 3-10-μm-thick layer on PET film, removal of the layer, and
grinding.

IT 260544-92-1P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(pigment; thermostable, liquid-crystalline **polymeric** pigments for

pearlescent coatings)

RN 260544-92-1 CAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[(1-oxo-2-propenyl)oxy]benzoate],
polymer with 1,4-phenylene bis[4-[4-[(1-oxo-2-
propenyl)oxy]butoxy]benzoate] (9CI) (CA INDEX NAME)

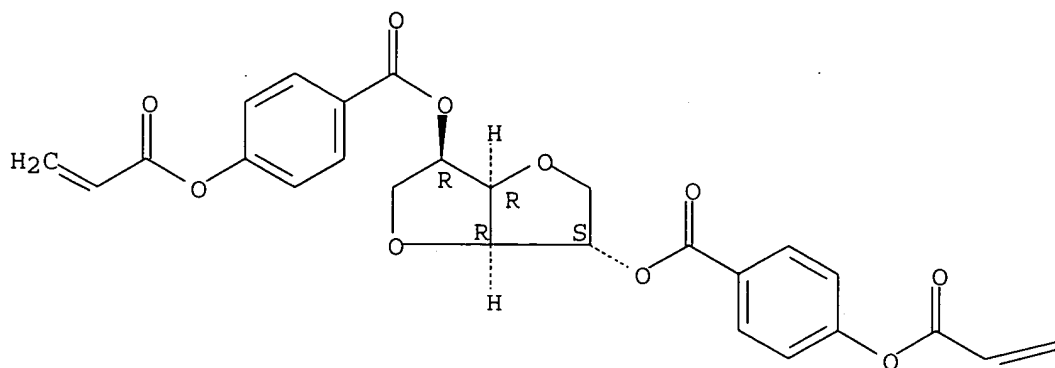
CM 1

CRN 256513-67-4

CMF C26 H22 O10

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

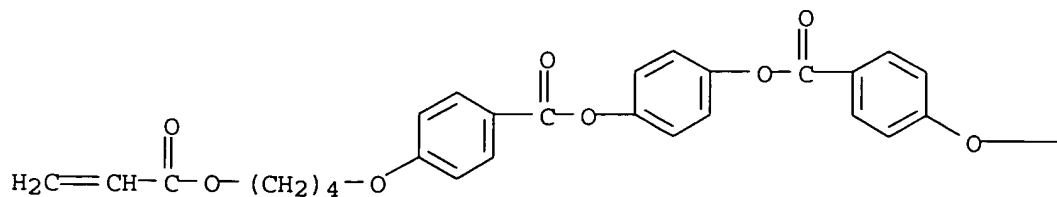
=CH₂

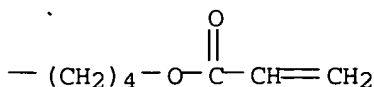
CM 2

CRN 132694-65-6

CMF C34 H34 O10

PAGE 1-A





REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:752424 CAPLUS

DOCUMENT NUMBER: 134:42464

TITLE: Cross-Linkable Liquid Crystal Monomers Containing Hydrocarbon 1,3-Diene Tail Systems

AUTHOR(S): Hoag, Benjamin P.; Gin, Douglas L.

CORPORATE SOURCE: Department of Chemistry, University of California, Berkeley, CA, 94720-1460, USA

SOURCE: Macromolecules (2000), 33(23), 8549-8558

CODEN: MAMOBX; ISSN: 0024-9297

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The unprecedented use of **polymerizable** hydrocarbon tail systems containing 1,3-diene groups for the design of thermotropic and lyotropic liquid crystal (LC) monomers is described. Cross-linkable LC dienes are synthesized by attaching LC core units to modular ω -bromoalka-1,3-diene tails of variable length. These modular diene tails are synthesized by the oxidation of long chain ω -bromoalkan-1-ols to the corresponding ω -bromoalkanals. Reaction of the ω -bromoalkanals with Matteson's reagent, followed by treatment with triethanolamine and deoxysilylation under Peterson elimination conditions, affords the desired ω -bromoalka-1,3-diene tails. The effect of the 1,3-diene group on the mesogenic behavior of certain thermotropic and lyotropic LC systems was determined by examining 1,3-diene analogs of a thermotropic calamitic LC diacrylate and a taper-shaped lyotropic LC triacrylate. Compared to their diacrylate analogs, the thermotropic LC bis(1,3-diene)s exhibit the same progression of nematic and smectic phases but with higher smectic C to nematic transition temps. and higher clearing temps. Replacement of the three acrylate groups in the tapered-shaped lyotropic LC monomer with 1,3-diene moieties had little effect on its tendency to form the inverted hexagonal phase at room temperature in the presence of water. The lyotropic LC diene phases also exhibit higher clearing temps. than the corresponding LC triacrylate. The 1,3-diene group was an efficient crosslinking unit for the photopolymerization of lyotropic LC phases at ambient temperature because of its hydrophobicity, minimal phase perturbation, and the high degree of photopolymerization. With thermotropic LC systems, however, Diels-Alder dimerization of adjacent diene units was found to occur upon heating the thermotropic LC bis(diene) monomers to ca. 90° or higher. Thus, as a photopolymerizable group in LC monomer design, the practical utility of the 1,3-diene group appears to be limited to temperature regimes below 90°.

IT 312958-59-1P

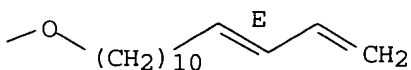
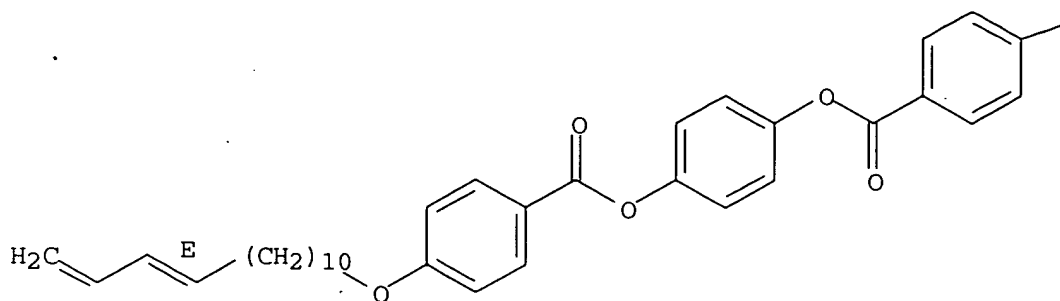
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(thermotropic liquid crystalline, monomer; preparation of crosslinkable liquid crystal monomers containing hydrocarbon 1,3-diene tail systems)

RN 312958-59-1 CAPLUS

CN Benzoic acid, 4-[(11E)-11,13-tetradecadienyloxy]-, 1,4-phenylene ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.



REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:593952 CAPLUS

DOCUMENT NUMBER: 133:296764

TITLE: Study on synthesis and lc behaviors of novel ternary polyurethanes

AUTHOR(S): Lian, Yanqing; Liu, Deshan; Zhou, Qixiang

CORPORATE SOURCE: Institute of Polymer Science and Engineering,
Department of Chemical Engineering and Laboratory of
Advanced Materials, Tsinghua University, Beijing,
100084, Peop. Rep. China

SOURCE: Polymer Preprints (American Chemical Society, Division
of Polymer Chemistry) (2000), 41(2),
1296-1297

CODEN: ACPPAY; ISSN: 0032-3934

PUBLISHER: American Chemical Society, Division of Polymer
Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Nematic polyester-polyurethanes were prepared by terpolymn. of the
hydroquinone diester of 4-hydroxybenzoic acid with 2,4-TDI (or MDI) and
HO(CH2)nOH (n = 2-10). The effects of diisocyanate and diol structure on
the phase transition temps. and textures of the products were discussed.

IT 301307-67-5P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and phase transition temps. of nematic polyester-polyurethanes)

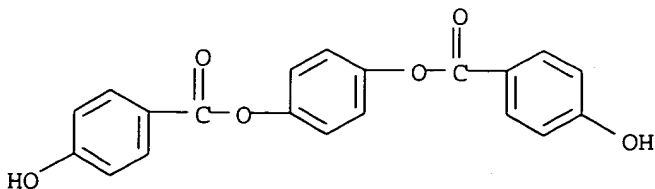
RN 301307-67-5 CAPLUS

CN Benzoic acid, 4-hydroxy-, 1,4-phenylene ester, polymer with 1,2-ethanediol
and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

CM 1

CRN 53201-62-0

CMF C20 H14 O6



CM 2

CRN 107-21-1

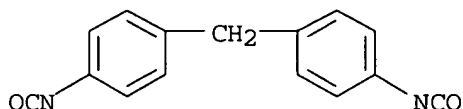
CMF C2 H6 O2

HO-CH₂-CH₂-OH

CM 3

CRN 101-68-8

CMF C15 H10 N2 O2



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:273781 CAPLUS

DOCUMENT NUMBER: 133:17928

TITLE: Synthesis and characterization of smectic C(Sc) phase liquid crystal polymers with mesogen laterally fixed onto the main chain. (II)

AUTHOR(S): Zhang, Shu-yuan; Ning, Chao-feng; Zheng, Shijun; Ma, Zhi; Li, Zifa; Zhou, Qi-feng

CORPORATE SOURCE: Institute of Chemistry and Chemical Engineering, Zhengzhou University, Zhengzhou, 450052, Peop. Rep. China

SOURCE: Gaofenzi Cailiao Kexue Yu Gongcheng (2000), 16(2), 18-22

CODEN: GCKGEI; ISSN: 1000-7555

PUBLISHER: Gaofenzi Cailiao Kexue Yu Gongcheng Bianjibu

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB A New series of smectic C phase liquid crystal polymers with mesogenic laterally fixed onto the main chain was synthesized via low temperature solution condensation polymerization from 2,5-bis(p-isoalkoxybenzoyloxy)hydroquinone and aliphatic chloride with different structure. The low mol. weight compds. were analyzed by elementary anal., IR, ¹H-NMR and MS. The polymers were characterized by GPC, DSC, TG, WAXD (wide-angle x-ray diffraction) and polarizing microscope with heating stage. All the polymers go to liquid crystal phase when heated to their melting temperature (T_m). The broken focal-conic texture can be observed. Temperature-variable X-ray diffraction realized that they are smectic C phase. Both T_m and T_i (clearing temperature of liquid crystal phase) of all the polymers decrease with the increase of the end alkoxy group length and the flexible spacer unit in the polymers gets longer, the liquid crystal temperature range of the polymers becomes narrow.

IT 272790-34-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(liquid crystalline; synthesis and characterization of smectic C(Sc) phase liquid crystal polymers with mesogen laterally fixed onto main chain)

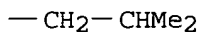
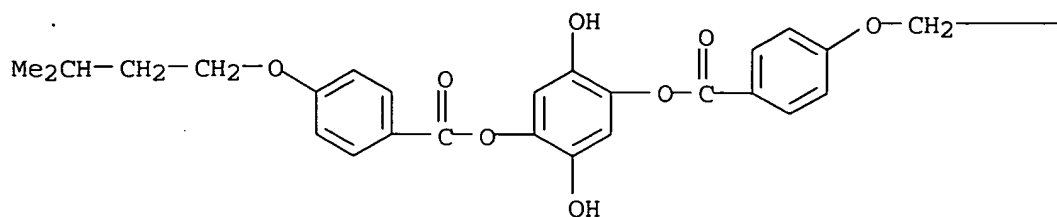
RN 272790-34-8 CAPLUS

CN Benzoic acid, 4-(3-methylbutoxy)-, 2,5-dihydroxy-1,4-phenylene ester, polymer with decanedioyl dichloride (9CI) (CA INDEX NAME)

CM 1

CRN 195156-64-0

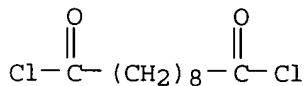
CMF C30 H34 O8



CM 2

CRN 111-19-3

CMF C10 H16 Cl2 O2



L7 ANSWER 5 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:114641 CAPLUS

DOCUMENT NUMBER: 132:158988

TITLE: **Polymerizable** composition comprising epoxy compounds

INVENTOR(S): Joliffée, Emma Jane; May, Alison Linda

PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany

SOURCE: Brit. UK Pat. Appl., 32 pp.

CODEN: BAXXDU

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2338240	A1	19991215	GB 1999-12054	19990524 <--
GB 2338240	B2	20020814		

PRIORITY APPLN. INFO.: EP 1998-109314 A 19980522

OTHER SOURCE(S): MARPAT 132:158988

AB A **polymerizable** composition containing mesogenic epoxy compds. is described which is useful for preparation of anisotropic polymers and anisotropic polymer films with strong adhesion to other films or substrates and which can even act as their own adhesive. The composition provides polymer films with good flexibility for use as decorative pigments, in security applications, electrooptical devices, color filters and adhesives. The composition includes the following components: (1) component A comprising ≥ 1 chiral **polymerizable** mesogenic compound having one terminal **polymerizable** epoxy group; (2) component B comprising ≥ 1 achiral **polymerizable** mesogenic compound having one terminal **polymerizable** epoxy group; (3) optionally component C comprising ≥ 1 **polymerizable** mesogenic compound having two or more terminal **polymerizable** epoxy groups; (4) optionally component D comprising ≥ 1 **polymerizable** non-mesogenic compds. having two or more terminal **polymerizable** epoxy groups; (5) optionally component E comprising

≥1 chiral dopants; (6) an initiator component F comprising
≥1 polymerization initiator.

IT 258278-35-2

RL: TEM (Technical or engineered material use); USES (Uses)

(photopolymerizable composition containing mesogenic epoxy compds. for preparation of
anisotropic polymers and anisotropic polymer films)

RN 258278-35-2 CAPLUS

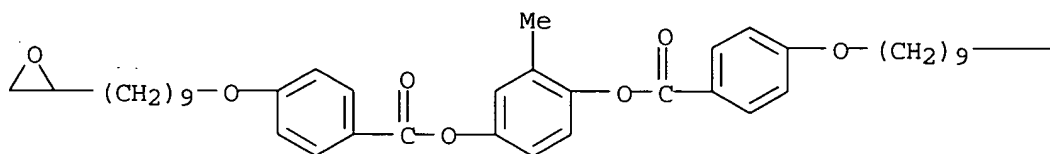
CN Benzoic acid, 4-[(9-oxiranylnonyl)oxy]-, 2-methyl-1,4-phenylene ester, ,
mixt. with 4-methoxyphenyl 4-[(9-oxiranylnonyl)oxy]benzoate and
4-(2-methylbutyl)phenyl 4-(oxiranylmethoxy)benzoate (9CI) (CA INDEX NAME)

CM 1

CRN 258278-34-1

CMF C43 H56 O8

PAGE 1-A



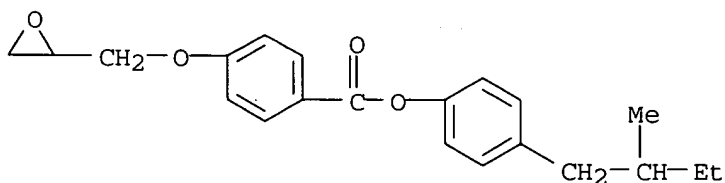
PAGE 1-B



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CRN 258278-33-0

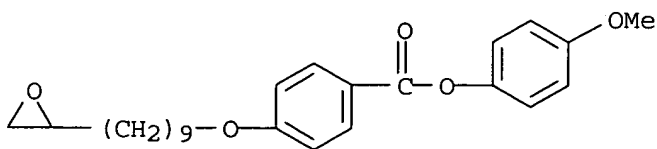
CMF C21 H24 O4



CM 3

CRN 144447-12-1

CMF C25 H32 O5



L7 ANSWER 6 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:738112 CAPLUS

DOCUMENT NUMBER: 132:64583

TITLE: Synthesis and characterization of novel chiral smectic
C(Sc*) phase shish-kebab type liquid crystalline block
copolymers

AUTHOR(S): Zheng, Shi-Jun; Li, Zi-Fa; Zhang, Shu-Yuan; Cao, Shao-Kui; Tang, Ming-Sheng; Fen, Qiu-Jun; Zhou, Qi-Feng

CORPORATE SOURCE: Department of Materials Engineering, Zhengzhou University, Zhengzhou, 450052, Peop. Rep. China

SOURCE: Chinese Journal of Polymer Science (1999), 17(6), 579-587

CODEN: CJPSEG; ISSN: 0256-7679

PUBLISHER: Springer-Verlag Singapore Pte. Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A new series of chiral shish-kebab type liquid crystal block copolymers that form the smectic C(Sc*) phase was synthesized by solution polycondensation from a chiral cyclohexenediol monomer synthesized from S-(-)-2-methyl-1-butanol. The copolymers were characterized by GPC, DSC, TGA, polarizing optical microscopy (POM), X-ray diffraction, and polarimetry. Copolymers incorporating terephthaloyl chloride and alkanediols entered into a liquid crystal phase when they were heated to their melting temps. (T_m), while copolymers based on sebacoyl chloride and polyethylene glycol were in a liquid crystal phase at room temperature with low viscosities. A smectic sanded texture or focal-conic texture were observed on POM. All the chiral block copolymers showed high optical activity. No racemization occurred. Temperature-variable X-ray diffraction study together with POM and polarimetric anal. showed the existence of a chiral smectic C(Sc*) phase. Thus we offer in this report the first example of shish-kebab type liquid crystal block copolymers that form a chiral smectic C(Sc*) phase. The variation of melting and isotropization temps. with mol. structure was also discussed.

IT 252959-57-2P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation of chiral smectic shish-kebab block polyesters)

RN 252959-57-2 CAPLUS

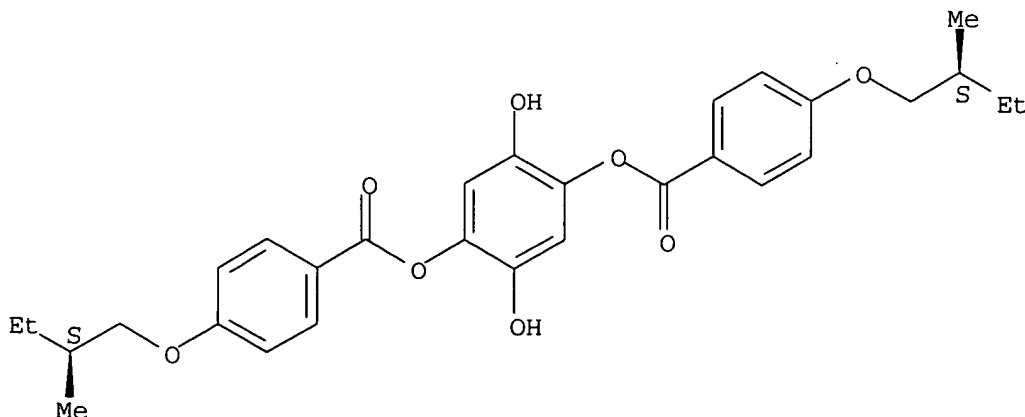
CN Benzoic acid, 4-[(2S)-2-methylbutoxy]-, 2,5-dihydroxy-1,4-phenylene ester, polymer with 1,4-benzenedicarbonyl dichloride and 1,4-butanediol (9CI)
(CA INDEX NAME)

CM 1

CRN 133003-94-8

CMF C30 H34 O8

Absolute stereochemistry. Rotation (+).



CM 2

CRN 110-63-4

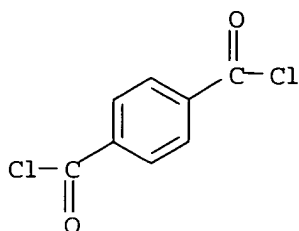
CMF C4 H10 O2

HO-(CH₂)₄-OH

CM 3

CRN 100-20-9

CMF C8 H4 Cl2 O2



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 7 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:670134 CAPLUS

DOCUMENT NUMBER: 131:287827

TITLE: **Polymeric** vehicle containing oligoester diols for high solids coatings

INVENTOR(S): Jones, Frank N.; Fu, Shou-kuan; Yuan, Xiaoying; Hua, Jun; Swarup, Vijay

PATENT ASSIGNEE(S): Exxon Chemical Patents, Inc., USA

SOURCE: U.S., 28 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5969085	A	19991019	US 1997-966691	19971110 <--
PRIORITY APPLN. INFO.:			US 1997-966691	19971110

AB The title polymer comprises a blend of at least one nonmesogenic linear oligoester diol and at least one hardener which is a mesogenic polyol, phenolic ester alc., or crystalline polyol, and is crosslinked with the nonmesogenic oligoester and hardener. The vehicle comprises a blend (viscosity 0.1-20 Pa-s at 20-60° and shear rate .apprx.1000 s-1) of ≥1 nonmesogenic, substantially linear oligoester diol (Mn 275-3000) and ≥1 hardener which is a mesogenic polyol (Mn 186-4000) or crystalline C5-200 polyol, the blend being reactive with a crosslinker.

IT **246152-29-4P**

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(**Polymeric** vehicle containing oligoester diols for high solids coatings)

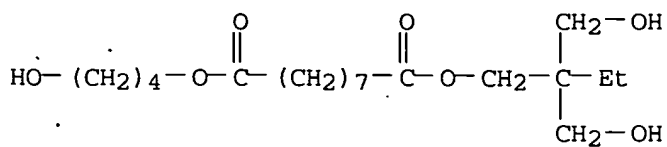
RN 246152-29-4 CAPLUS

CN Nonanedioic acid, 2,2-bis(hydroxymethyl)butyl 4-hydroxybutyl ester, polymer with formaldehyde, 1,4-phenylene bis[4-[2-hydroxy-3-[(1-oxoneodecyl)oxy]propoxy]benzoate] and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 246152-26-1

CMF C19 H36 O7



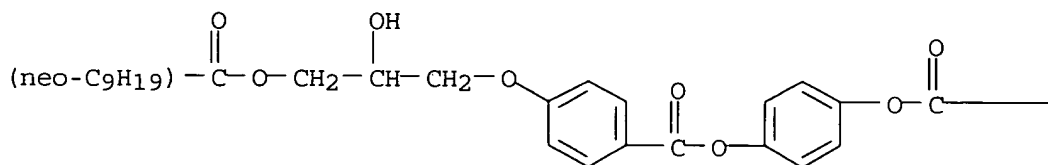
CM 2

CRN 192334-43-3

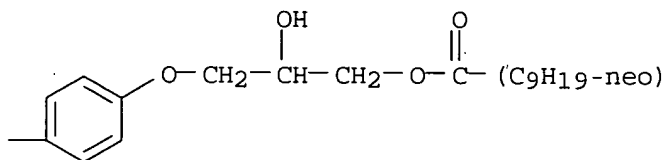
CMF C46 H62 O12

CCI IDS

PAGE 1-A



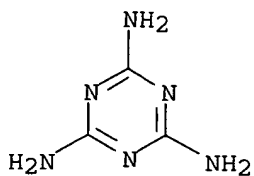
PAGE 1-B



CM 3

CRN 108-78-1

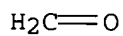
CMF C3 H6 N6



CM 4

CRN 50-00-0

CMF C H2 O



REFERENCE COUNT: 74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 8 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:412516 CAPLUS

DOCUMENT NUMBER: 131:185613

TITLE: Synthesis and properties of phosphorus containing

copoly(bismaleimide)
 AUTHOR(S): Wang, Chun Shan; Lin, Ching Hsuan
 CORPORATE SOURCE: Department of Chemical Engineering, National Cheng
 Kung University, Tainan, 701, Taiwan
 SOURCE: Polymer (1999), 40(20), 5665-5673
 CODEN: POLMAG; ISSN: 0032-3861
 PUBLISHER: Elsevier Science Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB A phosphorus containing bismaleimide (I) based on 2-(6-oxido-6H-dibenz(c,c)(1,2)6-yl)-1,4-dihydroxy phenylene was synthesized and copolymerized with 4,4'-bismaleimidodiphenylmethane (BMDM) in various weight ratio (0-33 phr). DSC scans show that the introduction of I into BMDM has increased the processing window for the resulted copoly(bismaleimide). DMA scans show these cured bismaleimides (BMIs) exhibit good modulus (apprx. 2 GPa) up to 400°C. There is no tangent peak for these cured BMIs implying that there is no relaxation below 400°C. TMA scans show introduction of I into BMDM increase the coefficient of thermal expansion (CTE). However, CTE of these cured BMIs are less than 50 ppm, which is much less than common epoxy. There is no second transition during TMA heating scans up to 440°C, so Tgs of these cured BMIs are higher than 440°C, which is consistent with the DMA measurement. TGA heating scans also indicate that they have high thermal stability and their char yields increase with the content of I. Char yields at 800°C shift from 48 to 63 in nitrogen and from 0 to 18 in air when 25 phr of I as introduced into BMDM. TGA isothermal expts. show that these cured BMIs are thermally more stable in air than in nitrogen below 450°C. Char yields also increase with the content of I.

IT 239801-58-2P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
 (synthesis and properties of phosphorus containing copoly(bismaleimide))

RN 239801-58-2 CAPLUS

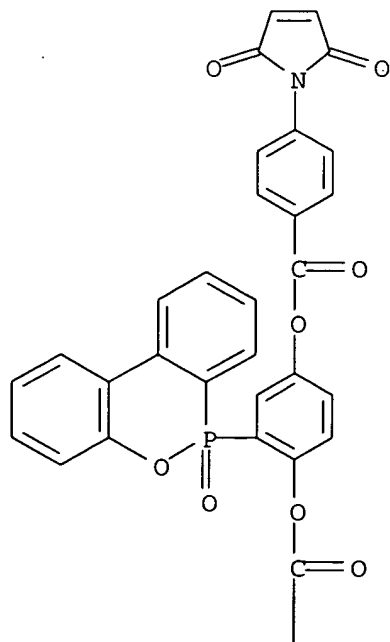
CN Benzoic acid, 4-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)-, 2-(6-oxido-6H-dibenz(c,e)[1,2]oxaphosphorin-6-yl)-1,4-phenylene ester, polymer with 1,1'-(methylenedi-4,1-phenylene)bis[1H-pyrrole-2,5-dione] (9CI) (CA INDEX NAME)

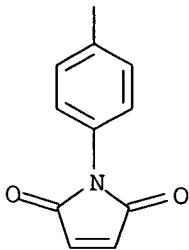
CM 1

CRN 239801-57-1

CMF C40 H23 N2 O10 P

PAGE 1-A

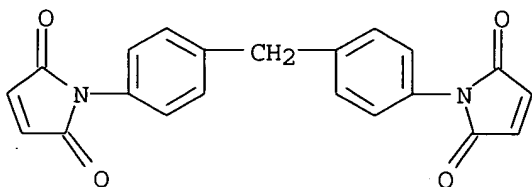




CM 2

CRN 13676-54-5

CMF C21 H14 N2 O4



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 9 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:310179 CAPLUS

DOCUMENT NUMBER: 131:102908

TITLE: Photo-induced diffusion during the formation of liquid-crystalline networks: a powerful tool to control polymer morphology down to nanoscale level

AUTHOR(S): Broer, D. J.; Lub, J.; Van Nostrum, C. F.; Wienk, M.

CORPORATE SOURCE: Philips Research Laboratories, Eindhoven, 5656AA, Neth.

SOURCE: Recent Research Developments in Polymer Science (1998), 2(Pt. 2), 313-324
CODEN: RRDPMX

PUBLISHER: Transworld Research Network

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Photo-initiated polymerization of liquid-crystalline [LC] monomers produces polymer films with a spatial control over the mol. organization. A powerful tool for creating even more complex mol. architectures than by LC order alone is photo-induced diffusion during polymerization of these monomers. Using UV light for initiation enables the modulation of the polymerization in space. Photomasks or holog. can modulate the light intensity in the film plane. This creates lateral concentration gradients in monomer blends based on reactivity differences and the evoking depletion of the most reactive monomer at the high intensity area. The induced diffusion causes local changes in properties. These property modulation becomes very large when during the formation of the structure a concentration-induced phase transition is passed. As an example the formation of an anisotropic holog. grating, consisting of alternating isotropic and oriented structures, is discussed. Also into the third dimension, perpendicular to the film plane, monomer diffusion can build up mol. structures during polymerization. Thereto light is modulated by the use of a dye, absorbing in the same region as the photoinitiator. The diffusion leads to a gradient in properties which for instance can be utilized to enhance the bandwidth of a cholesteric

IT 231963-62-5P

RN 231963-62-5 CAPLUS

CN Benzoic acid, 4-[[3-methyl-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-, 1,4-phenylene ester, polymer with 1,4-phenylene bis[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxyl]benzoate] (9CI) (CA INDEX NAME)

CMF C40 H46 O10

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CMF C38 H42 O10

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L7 ANSWER 10 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1999:254119 CAPLUS
 DOCUMENT NUMBER: 130:312217
 TITLE: **Polymerizable** chiral compounds and their application
 INVENTOR(S): Meyer, Frank; Ishida, Hiroki; Schuhmacher, Peter
 PATENT ASSIGNEE(S): BASF A.-G., Germany
 SOURCE: Ger. Offen., 12 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19843724	A1	19990415	DE 1998-19843724	19980924 <--
CH 692985	A	20030115	CH 1998-1981	19980930
JP 11193287	A2	19990721	JP 1998-284040	19981006 <--
GB 2330139	A1	19990414	GB 1998-21817	19981007 <--
GB 2330139	B2	20020612		

PRIORITY APPLN. INFO.: DE 1997-19744321 A1 19971008

OTHER SOURCE(S): MARPAT 130:312217

AB Chiral monomers useful in electrooptical devices and as dopants for liquid crystals have the structure [ZY(A)mMY]nX [A = spacer; M = mesogenic group containing 2 (un)substituted phenylene groups linked by O, CO, CO2, O2C, or OCO2; X = chiral residue of THF or hexahydrofuro[3,2-b]furan; each Y = direct link, O, S, CO2, O2C, OCO2, CONR, NRCO (R = H, Cl-4 alkyl); Z = **polymerizable** group; m = 0, 1; n = 2-6]. Thus, 1,4:3,6-dianhydrosorbitol bis(4-hydroxybenzoate) was esterified with 4-(acryloyloxy)butyl 4-(chloroformyl)phenyl carbonate in DMF containing cyclohexyldimethylamine to give a dextrorotatory diacrylate monomer in 96% yield with helical twisting power 63 μm^{-1} in ZLI 1840. Addition of various amts. of this monomer to various nematic compds. and mixts. gave compns. which reflected light at a wavelength which depended on the amount added.

IT **223585-43-1**

RL: TEM (Technical or engineered material use); USES (Uses)
 (nematic compound mixts. containing **polymerizable** mesogenic chiral compds.)

RN 223585-43-1 CAPLUS

CN Benzoic acid, 4-[(butoxycarbonyl)oxy]-, 2-methyl-1,4-phenylene ester, mixt. with methyl-4-[[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoyl]oxy]phenyl 4-[(butoxycarbonyl)oxy]benzoate and 2-methyl-1,4-phenylene bis[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoate] (9CI) (CA INDEX NAME)

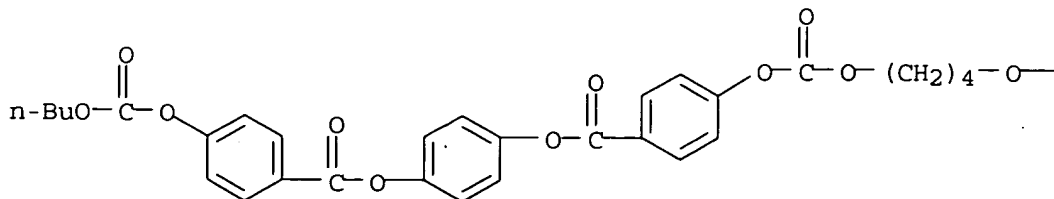
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CRN 223585-42-0

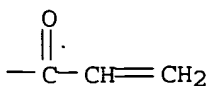
CMF C34 H34 O12

CCI IDS

PAGE 1-A



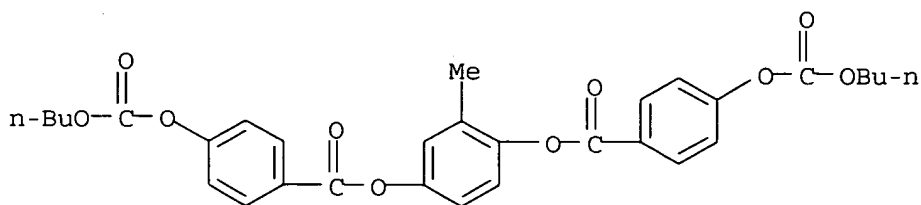
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CM 2

CRN 187586-33-0

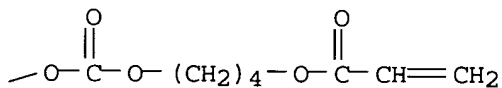
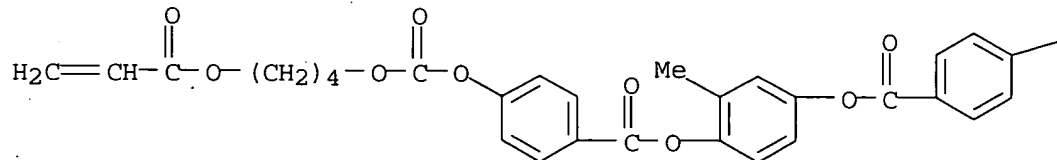
CMF C31 H32 O10



CM 3

CRN 187585-64-4

CMF C37 H36 O14



L7 ANSWER 11 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:36761 CAPLUS

DOCUMENT NUMBER: 130:182849

TITLE: Liquid crystalline main chain polysiloxane esters and their monomers: part II: synthesis and thermal behavior of polysiloxane esters with linear and tilted aromatic ester moieties

AUTHOR(S): Kossmehl, G.; Gerecke, B.; Harmsen, N.; Vieth, H. M.; Wolff, D.

CORPORATE SOURCE: Institut für Organische Chemie der Freien Universität Berlin, Berlin, 14195, Germany

SOURCE: Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals (1998), 317, 1-21

PUBLISHER: CODEN: MCLCE9; ISSN: 1058-725X
Gordon & Breach Science Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Liquid crystalline main chain polysiloxane esters have been formed by reacting bis[4-(ω -alkenyloxy)benzoic acid] esters containing 1,4-phenylene, 4,4'-biphenyldiyl, 2,7-fluorenediyl, and 2,7-fluorenonediyl units with α,ω -di-H-oligo(dimethylsiloxane)s. The chemical structure has been confirmed by elemental analyses, IR, ^1H -NMR and ^{13}C -NMR spectroscopy. Mol. wts. have been measured by GPC. The thermal behavior has been studied by polarizing microscopy and by DSC. In general the phase transitions are lower with a decreasing length of the alkylene spacers and with an increasing number of siloxane units within the spacer while they increase with magnification of the mesogenic groups. X-ray diffraction measurements for one polymer confirmed the type of the liquid crystalline phases (N, SC, SF). Deuteration has no influence on the thermal behavior.

IT 220693-53-8P 220693-87-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis and thermal behavior of liquid crystalline polyester-polysiloxanes with linear and tilted aromatic ester moieties)

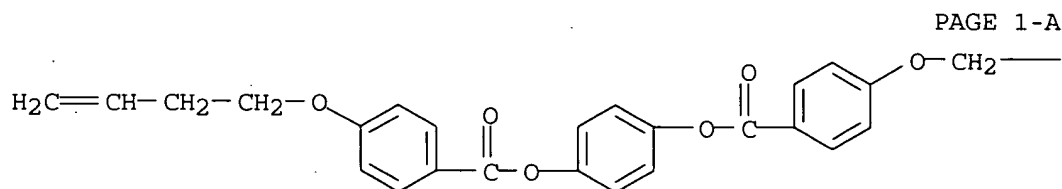
RN 220693-53-8 CAPLUS

CN Benzoic acid, 4-(3-butenyloxy)-, 1,4-phenylene ester, polymer with 1,1,3,3,5,5,7,7-octamethyltetrasiloxane (9CI) (CA INDEX NAME)

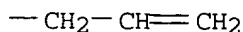
CM 1

CRN 169391-47-3

CMF C28 H26 O6



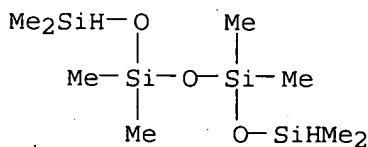
PAGE 1-B



CM 2

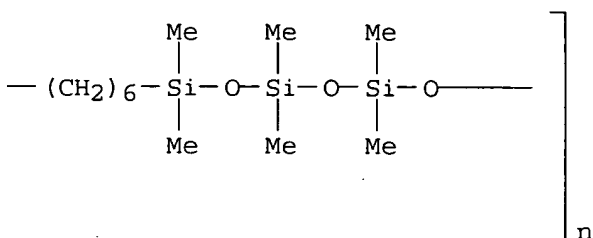
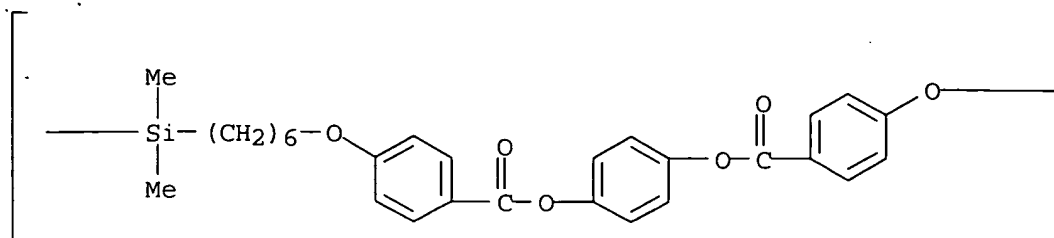
CRN 1000-05-1

CMF C8 H26 O3 Si4



RN 220693-87-8 CAPLUS

CN Poly[oxy(1,1,3,3,5,5-hexamethyl-1,5-trisiloxanediyl)-1,6-hexanediyoxy-1,4-phenylenecarbonyloxy-1,4-phenyleneoxycarbonyl-1,4-phenyleneoxy-1,6-hexanediyl(dimethylsilylene)] (9CI) (CA INDEX NAME)



REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 12 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:723850 CAPLUS

DOCUMENT NUMBER: 129:331179

TITLE: Preparation of crosslinked macroscopically oriented polymers

INVENTOR(S): Hikmet, Rifat Ata Mustafa; Lub, Johan

PATENT ASSIGNEE(S): Koninklijke Philips Electronics N.V., Neth.; Philips AB

SOURCE: PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9849253	A1	19981105	WO 1998-IB395	19980319 <--
W: JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 939795	A1	19990908	EP 1998-907094	19980319 <--
EP 939795	B1	20030604		
R: DE, FR, GB				
JP 2000515201	T2	20001114	JP 1998-529354	19980319 <--
US 6171518	B1	20010109	US 1998-64209	19980422
PRIORITY APPLN. INFO.:			EP 1997-201301	A 19970429
			WO 1998-IB395	W 19980319

AB The invention relates to a method of preparing an oriented crosslinked polymer, which comprises the steps of orienting and polymerizing a liquid-crystal composition. The liquid-crystal composition comprises a monomer which reduces the order during polymerization. This makes it possible to obtain oriented crosslinked polymers having a low degree of optical anisotropy and optical elements having a relatively low degree of scattering.

IT 215304-92-0P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of crosslinked macroscopically oriented polymers)

RN 215304-92-0 CAPLUS

CN Benzoic acid, 4-[(1-oxo-2-propenyl)oxy]-, 4-[(1-oxo-2-propenyl)oxy]phenyl ester, polymer with 2-methyl-1,4-phenylene bis[4-[(1-oxo-2-

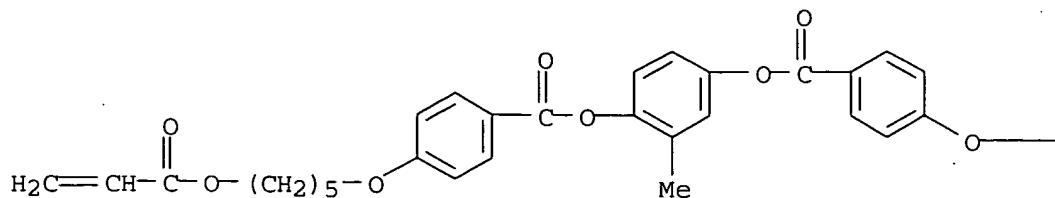
propenyl)oxy]pentyl]oxy]benzoate] (9CI) (CA INDEX NAME)

CM 1

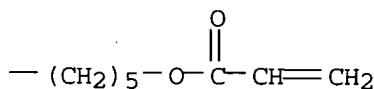
CRN 132900-76-6

CMF C37 H40 O10

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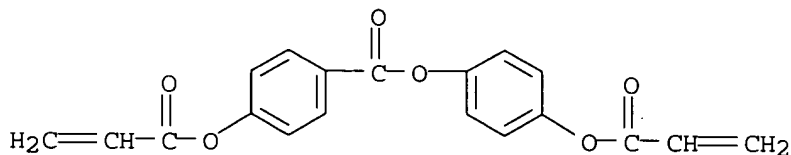
PAGE 1-B



CM 2

CRN 128866-56-8

CMF C19 H14 O6



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 13 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:716282 CAPLUS

DOCUMENT NUMBER: 129:331192

TITLE: Propargyl group-terminated, nematic or cholesteric polymers

INVENTOR(S): Schuhmacher, Peter; Kricheldorf, Hans R.; Gerken, Andreas

PATENT ASSIGNEE(S): BASF A.-G., Germany

SOURCE: Ger. Offen., 30 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19717371	A1	19981029	DE 1997-19717371	19970424 <--
PRIORITY APPLN. INFO.:			DE 1997-19717371	19970424
OTHER SOURCE(S):	MARPAT	129:331192		

AB The title polymers (polyesters and/or polycarbonates), with specified structures and thermally curable, especially useful in coatings (no data), are

prepared A 5:95 mixture of isosorbide bis[(4'-propargyloxy)-4-biphenylcarboxylate] and 2-methylhydroquinone bis[(4'-propargyloxy)-4-biphenylcarboxylate] was crosslinkable in the liquid-crystalline phase and gave enantiotropic, cholesteric melts with Grandjean texture reddish-blue and yellow before and after crosslinking, resp.

IT 215245-15-1P

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(propargyl group-terminated, nematic or cholesteric polymers)

RN 215245-15-1 CAPLUS

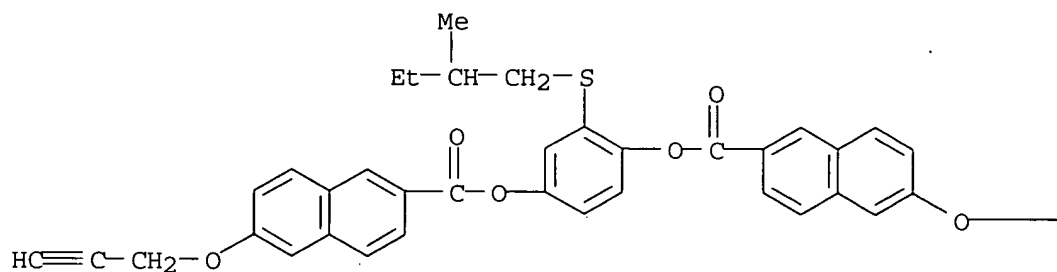
CN 2-Naphthalenecarboxylic acid, 6-(2-propynyloxy)-, 2-[(2-methylbutylthio)-1,4-phenylene ester, polymer with 1,4-phenylene bis[6-(2-propynyloxy)-2-naphthalenecarboxylate] (9CI) (CA INDEX NAME)

CM 1

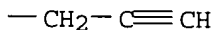
CRN 215245-13-9

CMF C39 H32 O6 S

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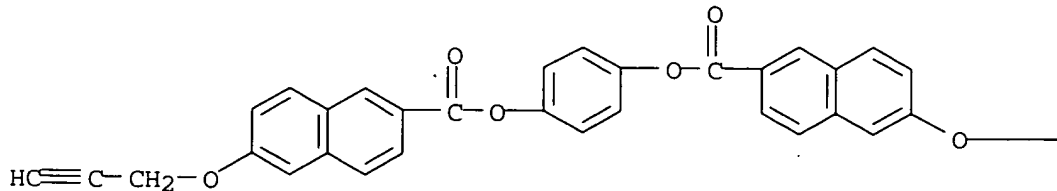


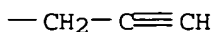
CM 2

CRN 193631-30-0

CMF C34 H22 O6

PAGE 1-A





L7 ANSWER 14 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:668107 CAPLUS

DOCUMENT NUMBER: 129:308882

TITLE: Use of compounds as liquid-crystal polymers and preparation of the polymers

INVENTOR(S): Dannenhauer, Fritz; Gailberger, Michael; Holdik, Karl; Strelzyk, Katja; Kurschner, Kathrin; Stohr, Andreas; Strohmriegl, Peter

PATENT ASSIGNEE(S): Daimler-Benz A.-G., Germany

SOURCE: Eur. Pat. Appl., 23 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 869112	A1	19981007	EP 1998-104771	19980317 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19714119	A1	19981008	DE 1997-19714119	19970405 <--
JP 10310612	A2	19981124	JP 1998-128024	19980403 <--
US 6303050	B1	20011016	US 1999-465776	19991217
PRIORITY APPLN. INFO.:			DE 1997-19714119	A 19970405
			US 1998-55303	B3 19980406

AB Monomers for preparing cholesteric liquid-crystal polymers having nematic phases are described. The synthesis of some benzoic acid hydroxyphenyl ester derivs. is described.

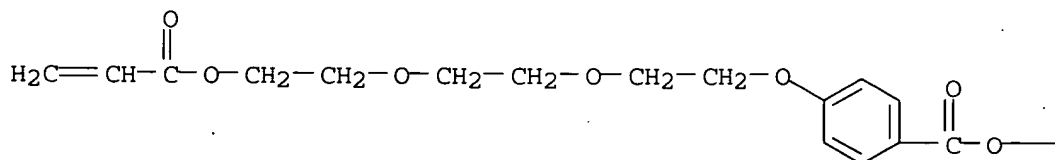
IT **214398-35-3P**

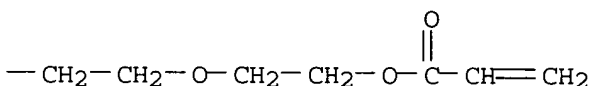
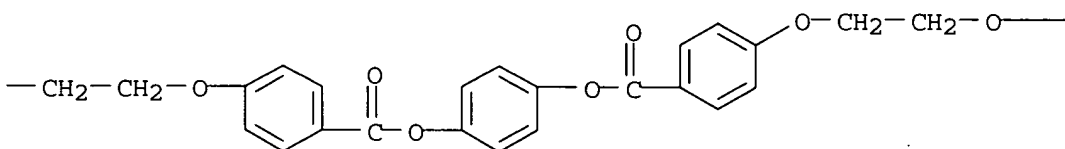
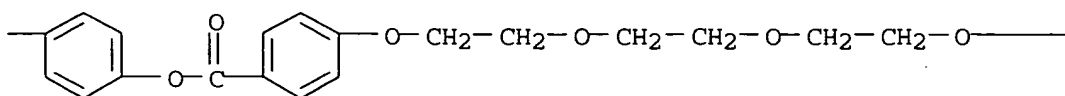
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of; for preparing cholesteric liquid-crystal polymers having nematic phases)

RN 214398-35-3 CAPLUS

CN Benzoic acid, 4,4'-[oxybis(2,1-ethanediylloxy-2,1-ethanediylloxy)]bis-, bis[4-[[4-[2-[2-[2-[(1-oxo-2-propenyl)oxy]ethoxy]ethoxy]ethoxy]benzoyl]oxy]phenyl] ester (9CI) (CA INDEX NAME)





REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 15 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:614817 CAPLUS

DOCUMENT NUMBER: 129:290482

TITLE: Relationship between chemical structure and properties for mesogen-jacketed liquid crystal polymers

AUTHOR(S): Wan, Xin-Hua; Zhou, Qi-Feng; Zhang, Dong; Zhang, Yong; Feng, Xin-De

CORPORATE SOURCE: Dep. Polymer Sci. & Engineering, College Chem., Peking Univ., Beijing, 100871, Peop. Rep. China

SOURCE: Gaodeng Xuexiao Huaxue Xuebao (1998), 19(9), 1507-1512

CODEN: KTHPDM; ISSN: 0251-0790

PUBLISHER: Gaodeng Jiaoyu Chubanshe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB Seven novel mesogen-jacketed liquid crystal polymers and their monomers were designed and synthesized. Effects of chemical structure and steric features on liquid crystalline phase forming were studied. The introduction of polar or polarizable group at the end of the mesogen units could increase the m.p. and clear point of monomers. The m.p. and clear point of the polymers increased with increasing axial ratio of mesogen units. The stability of liquid crystalline phase was enhanced by polymerization. The glass temperature of the polymers

increased with increasing polarity, rigidity and steric requirement of the mesogen units. The amide group can increase the m.p. of monomers and glass transition temperature of the polymers no matter it was used as the end group or linkage of the mesogen units. However, the stability of liquid crystalline phase was increased by the amide end groups and decreased by the amide linkages.

IT 214218-12-9P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

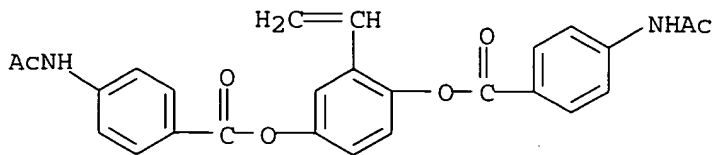
(liquid crystal; preparation, chemical structure, phase morphol., and thermal

properties mesogen-jacketed liquid-crystalline styrene derivative copolymers)

RN 214218-12-9 CAPLUS
CN Benzoic acid, 4-(acetyl-amino)-, 2-ethenyl-1,4-phenylene ester, homopolymer
(9CI) (CA INDEX NAME)

CM 1

CRN 214218-01-6
CMF C26 H22 N2 O6



L7 ANSWER 16 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:227343 CAPLUS

DOCUMENT NUMBER: 128:283160

TITLE: Liquid crystalline block copolymers having branched mesogenic groups and non-liquid crystalline blocks, and manufacture thereof

INVENTOR(S): Imai, Masaru; Frings, Rainer

PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

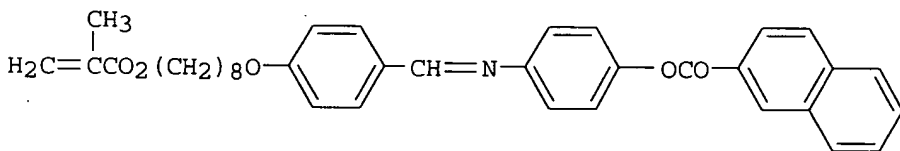
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10095821	A2	19980414	JP 1996-254452	19960926 <--
PRIORITY APPLN. INFO.: GI			JP 1996-254452	19960926



I

AB Title copolymers having branched mesogenic groups containing 3-5 aromatic rings and showing isotropization temperature (Ti) 200-400° and liquid crystal temperature range ≥80°, useful as polymer reinforcing agents and compatibilizers, are manufactured by photopolymerization of monomers using thermally decomposable photopolymerization initiators, then thermal polymerization of liquid crystalline polymers (sic) with the resulting macroinitiators having thermally reactive groups. Poly(Me methacrylate) macroinitiator was reacted with liquid crystalline monomer I at 95° for 60 h in a sealed tube to give 53:47 I-Me methacrylate block copolymer with Ti .apprx.260° and Tm .apprx.165°.

IT 205674-60-8P

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(manufacture of liquid crystalline block copolymers for polymer reinforcing agents and compatibilizers)

RN 205674-60-8 CAPLUS

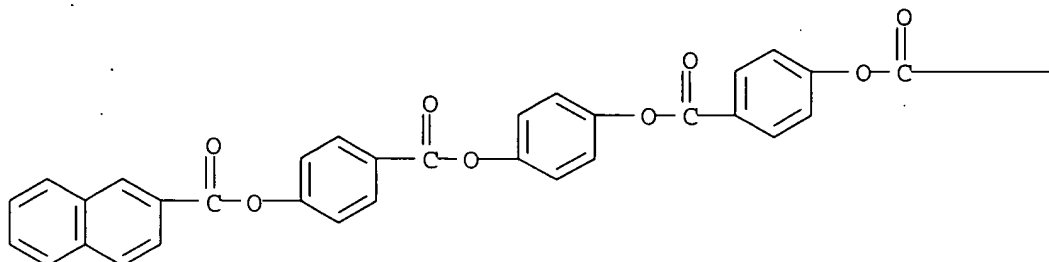
CN 1H-Pyrrole-1-hexanoic acid, 2,5-dihydro-2,5-dioxo-, 4-[[4-[[4-[(2-

naphthalenylcarbonyl)oxy]benzoyl]oxy]phenoxy]carbonyl]phenyl ester,
polymer with methyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

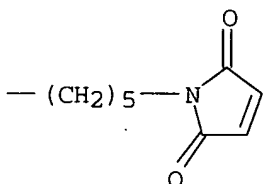
CM 1

CRN 205674-59-5
CMF C41 H31 N O10

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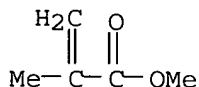


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CM 2

CRN 80-62-6
CMF C5 H8 O2



L7 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:219088 CAPLUS

DOCUMENT NUMBER: 128:271087

TITLE: Depression of mesophase stability caused by
polymerization

AUTHOR(S): Jacobi, A.; Pirwitz, G.; Weissflog, W.

CORPORATE SOURCE: Max Planck Research Unit Liquid Crystalline Systems at
the Martin Luther University, Halle, 06108, Germany

SOURCE: Proceedings of SPIE-The International Society for
Optical Engineering (1998), 3319(Liquid
Crystals: Chemistry and Structure), 249-255

CODEN: PSISDG; ISSN: 0277-786X

PUBLISHER: SPIE-The International Society for Optical Engineering

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Side-on polysiloxanes bearing laterally branched mesogens were synthesized. The mesogens have a bulky lateral branch containing an aromatic ring with an alkenyl chain in the p-position, which enables coupling to the polysiloxane backbone. Surprisingly, reaction with poly(hydrogen Me siloxane) can cause an increase or decrease of the clearing temps. The dimension of the mesophase destabilization was up to 27 K. By systematic

investigations of this unusual effect, a clear dependence on steric proportions was proven. Especially, the relation of the length of the terminal alkyl chains and the length of the flexible aliphatic spacer is of great influence.

IT • 205689-75-4DP, reaction products with poly(hydrogen Me siloxane)

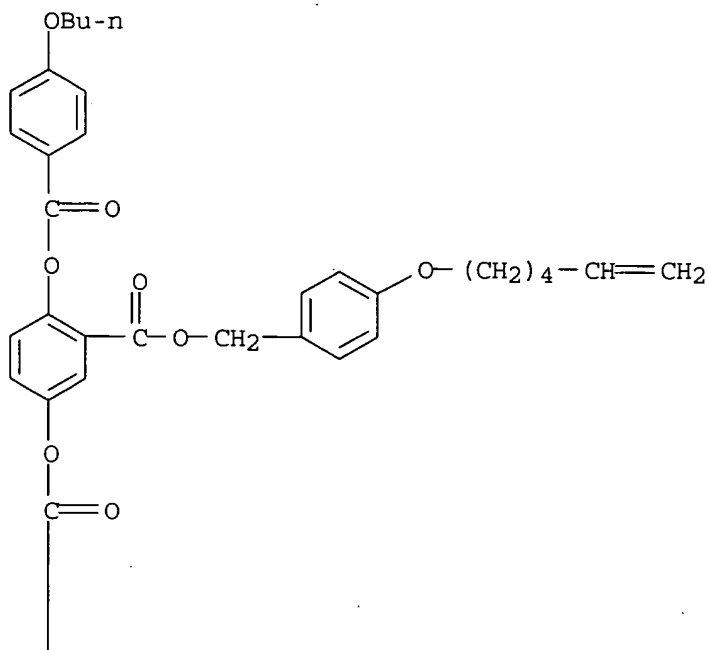
205689-75-4P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(depression of mesophase stability caused by coupling to poly(hydrogen Me siloxane))

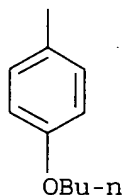
RN 205689-75-4 CAPLUS

CN Benzoic acid, 2,5-bis[(4-butoxybenzoyl)oxy]-, [4-(5-hexenyloxy)phenyl]methyl ester (9CI) (CA INDEX NAME)

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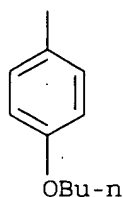
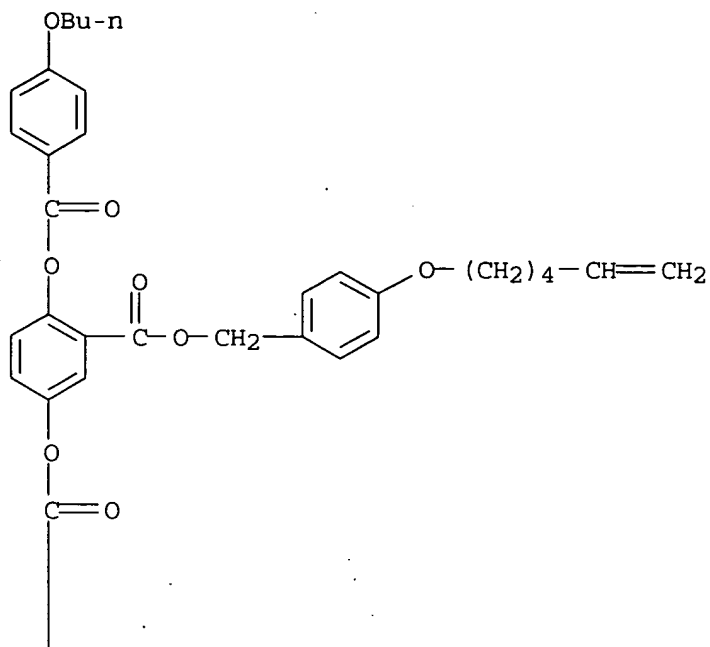


PAGE 2-A

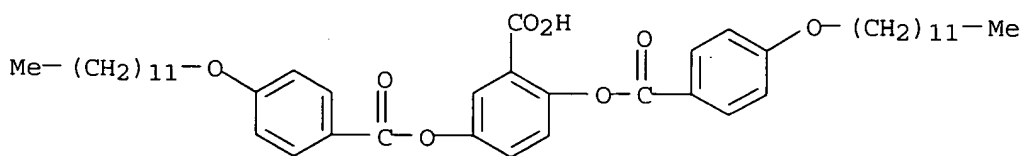


RN 205689-75-4 CAPLUS

CN Benzoic acid, 2,5-bis[(4-butoxybenzoyl)oxy]-, [4-(5-hexenyloxy)phenyl]methyl ester (9CI) (CA INDEX NAME)



IT **205689-95-8P**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (intermediate for mesogen; depression of mesophase stability caused by coupling to poly(hydrogen Me siloxane))
 RN 205689-95-8 CAPLUS
 CN Benzoic acid, 2,5-bis[[4-(dodecyloxy)benzoyl]oxy] - (9CI) (CA INDEX NAME)

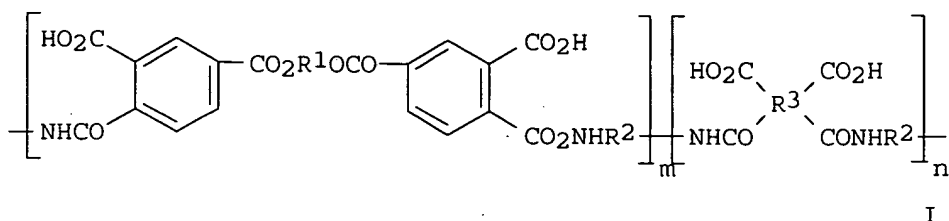


REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 18 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1998:154759 CAPLUS
 DOCUMENT NUMBER: 128:277945
 TITLE: FC tapes and TAB tapes employing intrinsic polyimide base films in assembling semiconductor devices
 INVENTOR(S): Okada, Koji
 PATENT ASSIGNEE(S): Kanegafuchi Chemical Industry Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent

LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10070157	A2	19980310	JP 1996-224737	19960827 <--
PRIORITY APPLN. INFO.: GI			JP 1996-224737	19960827



AB The base films laminated in FC tapes (protective/adhesive/insulative-base film laminates) employed in tape-automatic-bonding (TAB) for assembling semiconductor devices are made from polyimide block copolymers I (R1 = divalent organic group m; R2 = divalent organic groups selected from phenylene, biphenylene, and naphthalenediyl, unsubstituted or substituted by Me, Cl, Br, F, MeO-; R3 = tetravalent organic group; m,n are integers) which has low thermal expansion, low moisture-absorption, and low moisture-caused expansion. The semiconductor devices and circuits are patterned by laminating a Cu film and patterning the Cu film on the FC tapes after delamination of the base film by TAB process. The polyamide film provides the FC tapes in TAB processing with an expansion coefficient equivalent to that of metal and glass and with a modules of elasticity high enough in prevention of warping and curling for precision fabrication of semiconductor devices and integrated circuits.

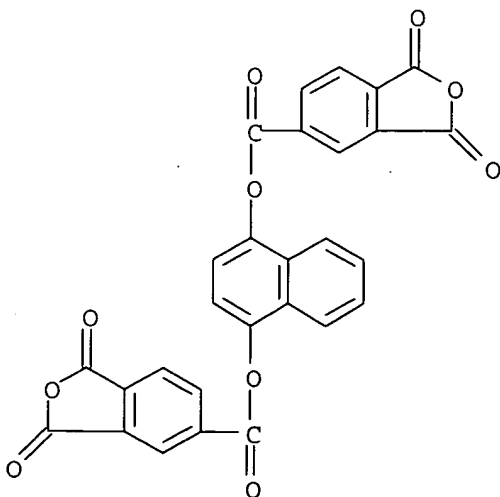
IT **203644-89-7P**

RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

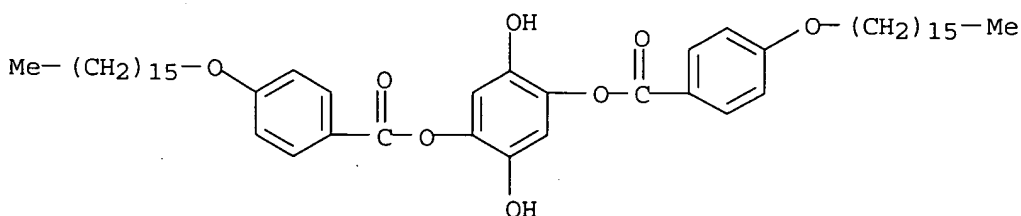
(FC tapes and TAB tapes employing intrinsic polyimide base films in assembling semiconductor devices)

RN 203644-89-7 CAPLUS

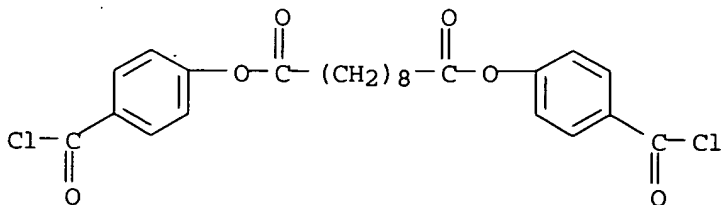
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-naphthalenediyl ester (9CI) (CA INDEX NAME)



ACCESSION NUMBER: 1997:806578 CAPLUS
 DOCUMENT NUMBER: 128:48764
 TITLE: Synthesis and characterization of a series of liquid crystal polymers with X-shaped two-dimensional mesogenic units
 AUTHOR(S): Li, Z. f.; Li, L.; Zhang, S. Y.; Cao, S. K.; Zhou, Q. F.
 CORPORATE SOURCE: Department of Materials Engineering, Zhengzhou University, Zhengzhou, 450052, Peop. Rep. China
 SOURCE: Polymers for Advanced Technologies (1997), 8(11), 674-682
 CODEN: PADTE5; ISSN: 1042-7147
 PUBLISHER: John Wiley & Sons Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Liquid crystal polymers (LCPs) with X-shaped two-dimensional mesogenic units were prepared via low temperature solution polycondensation of 4,4'-(α,ω -alkylenedioxy)dibenzoyl dichlorides and 2,5-bis(p-alkoxy benzoyloxy)-hydroquinones. The liquid crystalline behavior of the polymers was studied using DSC, polarized microscopy and x-ray diffraction. All the polymers show nematic thermotropic liquid crystalline structure, the melting temperature T_m and isotropization temperature T_i vary with the length of the flexible spacer and of the side groups. In the liquid crystal phase, a threaded texture was observed for the quinone and hydroquinone moieties, and a nematic schlieren texture with a high strength singularity was also observed in the hydroquinone polymers.
 IT 200124-98-7P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation and liquid crystal structure and phase transition temps. of alkylenedioxydibenzoyl-alkoxy-benzoyloxy hydroquinone polyesters with X-shaped mesogens)
 RN 200124-98-7 CAPLUS
 CN Decanedioic acid, bis[4-(chlorocarbonyl)phenyl] ester, polymer with 2,5-dihydroxy-1,4-phenylene bis[4-(hexadecyloxy)benzoate] (9CI) (CA INDEX NAME)
 CM 1
 CRN 200124-30-7
 CMF C52 H78 O8



CM 2
 CRN 76020-56-9
 CMF C24 H24 Cl2 O6



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:527999 CAPLUS

DOCUMENT NUMBER: 127:234686

TITLE: Synthesis and property of shish-kebab type
liquid-crystalline polymers with chiral carbons

AUTHOR(S): Zhou, Qi Feng; Xie, Ren; Zhu, Yan Tao

CORPORATE SOURCE: College Chemistry, Peking University, Beijing, 100871,
Peop. Rep. China

SOURCE: Macromolecular Symposia (1997), 118, 183-188

CODEN: MSYMEC; ISSN: 1022-1360

PUBLISHER: Huethig & Wepf

DOCUMENT TYPE: Journal

LANGUAGE: English

AB New polymers with chiral carbons and with rod-like mesogenic units being
stringed at waist (as the kebabs) by the main-chain (as the shish or
skewer) were synthesized and studied. All the chiral polymers are
optically highly active and have strong tendency of nematic phase
formation.

IT 195156-65-1P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(preparation and properties of shish-kebab type liquid-crystalline polyesters with
chiral carbons)

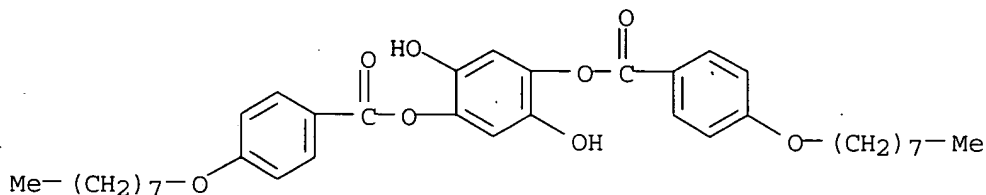
RN 195156-65-1 CAPLUS

CN Hexanedioic acid, polymer with 2,5-dihydroxy-1,4-phenylene
bis[4-(octyloxy)benzoate] (9CI) (CA INDEX NAME)

CM 1

CRN 154032-72-1

CMF C36 H46 O8



CM 2

CRN 124-04-9

CMF C6 H10 O4

HO₂C-(CH₂)₄-CO₂H

L7 ANSWER 21 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:107370 CAPLUS

DOCUMENT NUMBER: 126:119059

TITLE: Photocrosslinkable liquid-crystalline dyes and their
use

INVENTOR(S): Kelly, Stephen

PATENT ASSIGNEE(S): F. Hoffmann-La Roche Ag, Switz.

SOURCE: Eur. Pat. Appl., 20 pp.

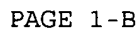
CODEN: EPXXDW

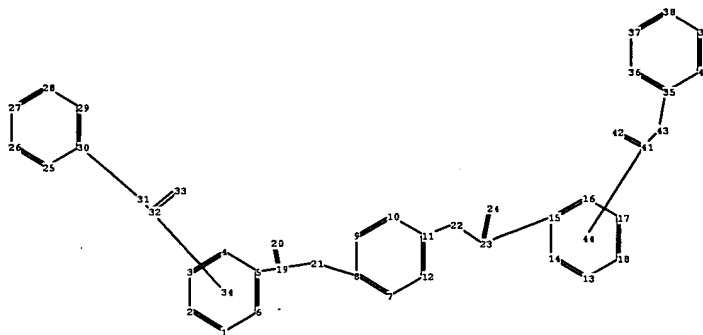
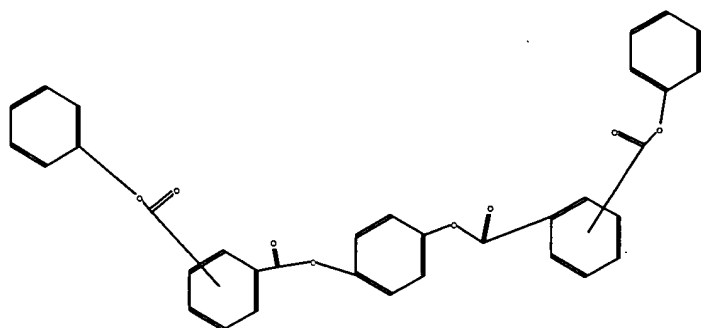
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:





chain nodes :

19 20 21 22 23 24 31 32 33 41 42 43

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 25 26 27 28 29 30 35
36 37 38 39 40

chain bonds :

5-19 8-21 11-22 15-23 19-20 19-21 22-23 23-24 30-31 31-32 32-33 35-43 41-42
41-43

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12 13-14 13-18 14-15
15-16 16-17 17-18 25-26 25-30 26-27 27-28 28-29 29-30 35-36 35-40 36-37 37-38
38-39 39-40

exact/norm bonds :

8-21 11-22 19-20 19-21 22-23 23-24 30-31 31-32 32-33 35-43 41-42 41-43

exact bonds :

5-19 15-23

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12 13-14 13-18 14-15
15-16 16-17 17-18 25-26 25-30 26-27 27-28 28-29 29-30 35-36 35-40 36-37 37-38
38-39 39-40

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom
12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:CLASS 20:CLASS
21:CLASS 22:CLASS 23:CLASS 24:CLASS 25:Atom 26:Atom 27:Atom 28:Atom 29:Atom
30:Atom 31:CLASS 32:CLASS 33:CLASS 34:CLASS 35:Atom 36:Atom 37:Atom 38:Atom
39:Atom 40:Atom 41:CLASS 42:CLASS 43:CLASS 44:CLASS


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=>
Uploading C:\Program Files\Stnexp\Queries\6121d.str

L7      STRUCTURE UPLOADED

=> d 17
L7 HAS NO ANSWERS
L7      STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

=> s 17
REGISTRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.


SAMPLE SEARCH INITIATED 15:50:19 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 1789 TO ITERATE

55.9% PROCESSED      1000 ITERATIONS                                0 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:   33243 TO 38317
PROJECTED ANSWERS:      0 TO    0

L8      0 SEA SSS SAM L7


L9      0 L8

=> s 17 full
REGISTRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.


FULL SEARCH INITIATED 15:50:25 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 35690 TO ITERATE

100.0% PROCESSED     35690 ITERATIONS                                12 ANSWERS
SEARCH TIME: 00.00.01

L10     12 SEA SSS FUL L7


L11     5 L10

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      20649811 PY<2001
L12     5 L11 AND PY<2001

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=> d 1-5 ibib abs hitstr

L12 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:582020 CAPLUS

DOCUMENT NUMBER: 134:148199

TITLE: The effect of monomer structure on the adhesive properties of thermally reversible isocyanate polymers

AUTHOR(S): Bigg, D. M.; Barry, R. G.; Markle, R. A.

CORPORATE SOURCE: Columbus, OH, USA

SOURCE: Annual Technical Conference - Society of Plastics

Engineers (2000), 58th(Vol. 1), 1228-1231

CODEN: ACPED4; ISSN: 0272-5223

PUBLISHER: Society of Plastics Engineers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The benefits of thermally reversible polymers derives from their structure; they dissociate into much lower mol. weight components when heated above a critical temperature and reform into a polymer when cooled below that temperature. This allows them to flow at a modestly elevated temperature, while exhibiting good strength, adhesion, solvent resistance at lower temps. Such polymers can be used as hot melt adhesives that combine the best features of both thermoplastics and thermosets. They can be reheated repeatedly, while producing a crosslinked network at ambient conditions. The properties of reversible isocyanate polymers depend on the structure of the monomers incorporated into the polymer backbone. The influence of several polyester-based monomers on the adhesive characteristics of the resulting polymer is summarized.

IT 324521-01-9 324521-02-0 324521-03-1

324521-04-2 324521-05-3

RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(monomer structure in relation to adhesive properties of thermally reversible isocyanate polymers)

RN 324521-01-9 CAPLUS

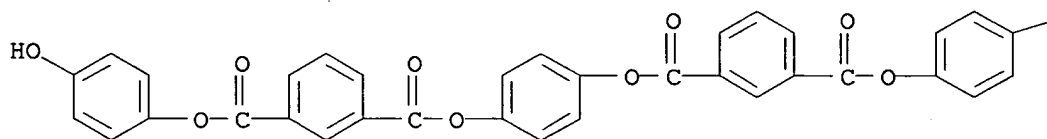
CN 1,3-Benzenedicarboxylic acid, 1,4-phenylene bis(4-hydroxyphenyl) ester, polymer with 1,5-diisocyanatonaphthalene and 2-oxepanone (9CI) (CA INDEX NAME)

CM 1

CRN 324521-00-8

CMF C34 H22 O10

PAGE 1-A



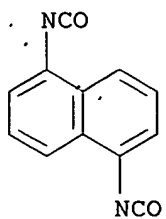
PAGE 1-B

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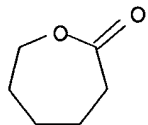
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CMF C12 H6 N2 O2



CM 3

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CMF C6 H10 O2

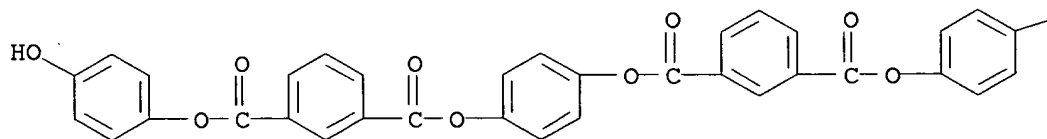


RN 324521-02-0 CAPLUS
CN 1,3-Benzenedicarboxylic acid, 1,4-phenylene bis(4-hydroxyphenyl) ester,
polymer with 1,1'-methylenebis[4-isocyanatobenzene] and 2-oxepanone (9CI)
(CA INDEX NAME)

CM 1

CRN 324521-00-8
CMF C34 H22 O10

PAGE 1-A

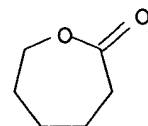


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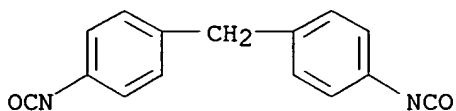
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CMF C6 H10 O2



CM 3

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CMF C15 H10 N2 O2

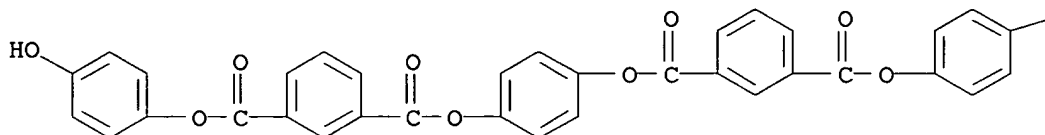


RN 324521-03-1 CAPLUS
CN 1,3-Benzenedicarboxylic acid, 1,4-phenylene bis(4-hydroxyphenyl) ester, polymer with carbonic acid, 1,1'-methylenebis[4-isocyanatobenzene], 4,4'-(1-methylethylidene)bis[phenol] and 2-oxepanone (9CI) (CA INDEX NAME)

CM 1

CRN 324521-00-8
CMF C34 H22 O10

PAGE 1-A

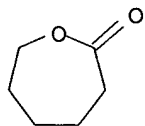


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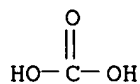
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CMF C6 H10 O2



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CMF C H2 O3

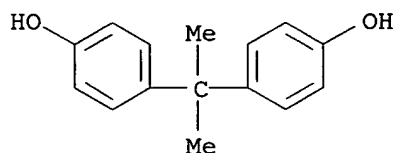


CM 4

CRN 101-68-8

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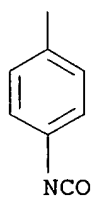
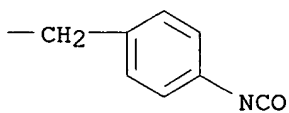
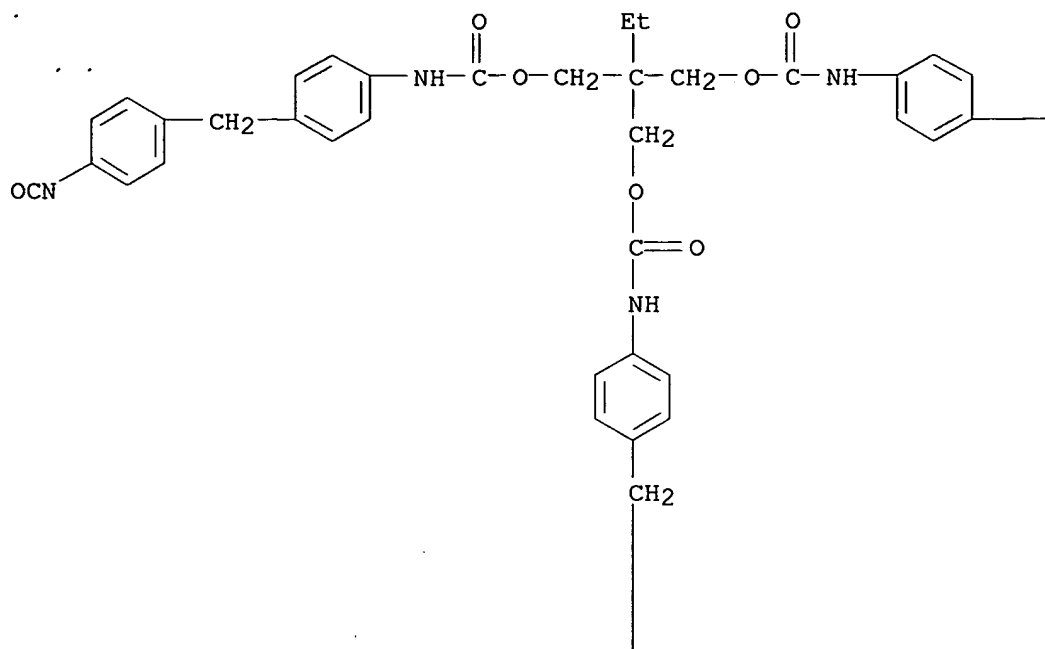
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CMF C15 H16 O2



CRN 324521-00-8
CMF C34 H22 O10

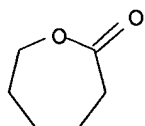
Oc1ccc(OCC(=O)c2ccc(cc2)C(=O)Oc3ccc(cc3)C(=O)c4ccc(cc4)C(=O)Oc5ccc(cc5)C)cc1 —OH

CRN 141182-64-1
CMF C51 H44 N6 O9



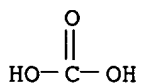
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CRN 502-44-3
CMF C6 H10 O2



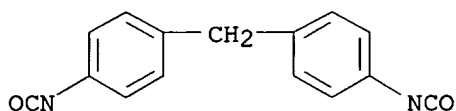
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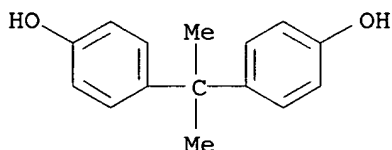
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CMF C15 H10 N2 O2



CM 6

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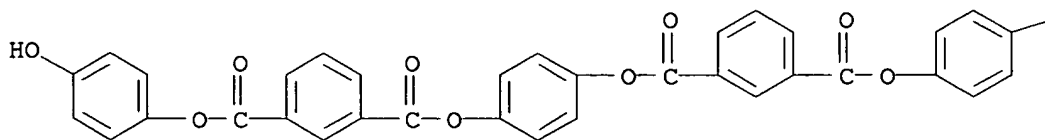


RN 324521-05-3 CAPLUS
CN 1,3-Benzenedicarboxylic acid, 1,4-phenylene bis(4-hydroxyphenyl) ester, polymer with carbonic acid, 1,5-diisocyanatonaphthalene, 2-ethyl-2-[[[4-[(4-isocyanatophenyl)methyl]phenyl]amino]carbonyl]oxy]methyl]-1,3-propanediyl bis[[4-[(4-isocyanatophenyl)methyl]phenyl]carbamate], 4,4'-(1-methylethylidene)bis[phenol] and 2-oxepanone (9CI) (CA INDEX NAME)

CM 1

CRN 324521-00-8
CMF C34 H22 O10

PAGE 1-A



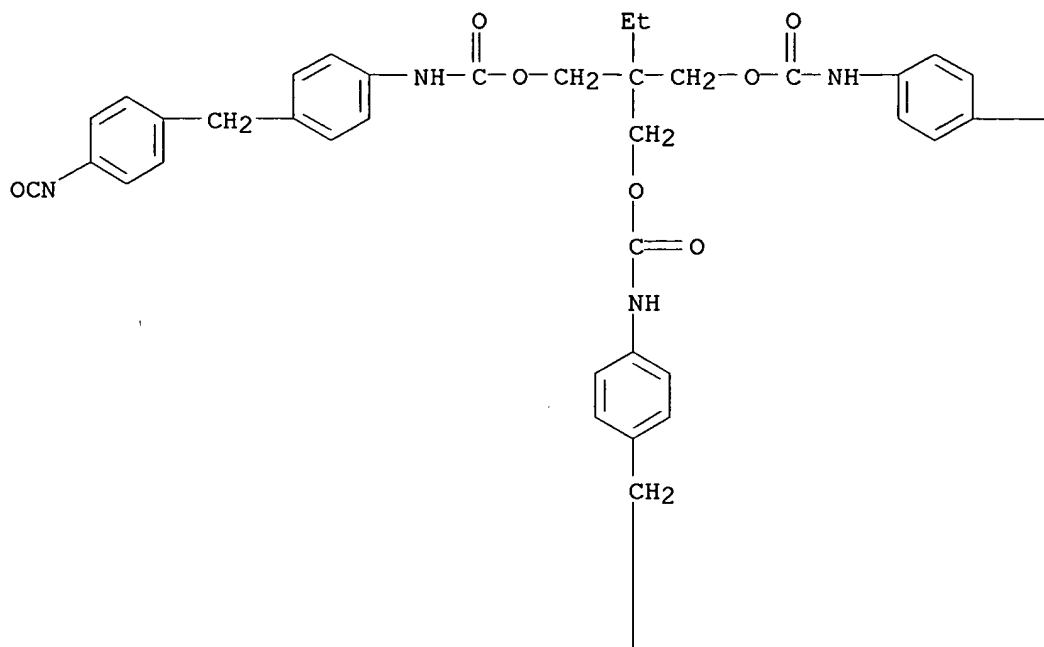
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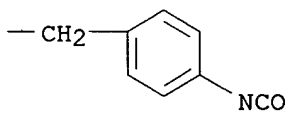
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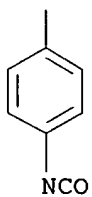
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PAGE 1-B

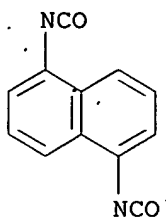


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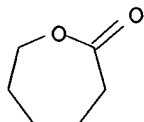
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CRN 3173-72-6
CMF C12 H6 N2 O2



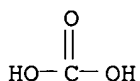
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CRN 502-44-3
CMF C6 H10 O2



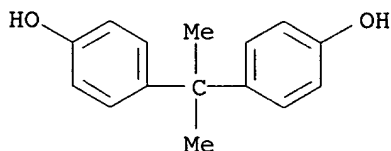
CM 5

CRN 463-79-6
CMF C H2 O3



CM 6

CRN 80-05-7
CMF C15 H16 O2



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:152248 CAPLUS

DOCUMENT NUMBER: 133:120757

TITLE: Synthesis of oligomeric alkylhydroquinone terephthalates. II

AUTHOR(S): Majnusz, Jerzy; Biedrzycki, Zbigniew

CORPORATE SOURCE: Department of Physical Chemistry and Technology of Polymers, Faculty of Chemistry, Silesian Technical University, Gliwice, PL 44-100, Pol.

SOURCE: Polish Journal of Applied Chemistry (1999), 43(1-2), 125-133

CODEN: PJACE2; ISSN: 0867-8928

PUBLISHER: Polish Scientific Publishers PWN

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Several preparation procedures of oligomeric alkylhydroquinone terephthalates containing four and more benzene rings, from 2-alkylhydroquinones, terephthaloyl chloride and monofunctional acid chlorides as well as 4-methoxyphenol are described. Oligoesters containing four to seven benzene rings were prepared in multi-step reactions of the defined compds., whereas oligoesters containing more than seven benzene rings were obtained by a two-step polycondensation of an excess of alkylhydroquinones with terephthaloyl chloride followed by the final reaction of the obtained polycondensation products terminated by hydroxyl groups with anisoyl chloride. The phase transition temps. and the chemical compns. of the compds. studied are given.

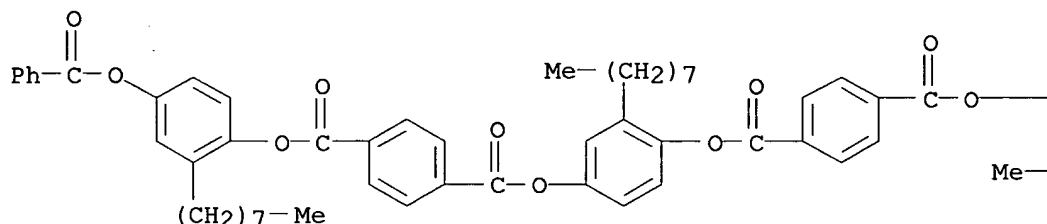
IT 285554-02-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(hydroxy-terminated, oligomeric; synthesis of oligomeric alkylhydroquinone terephthalates)

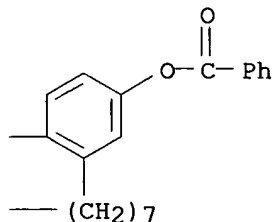
RN 285554-02-1 CAPLUS

CN 1,4-Benzenedicarboxylic acid, 2-octyl-1,4-phenylene bis[4-(benzoyloxy)-2-octylphenyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



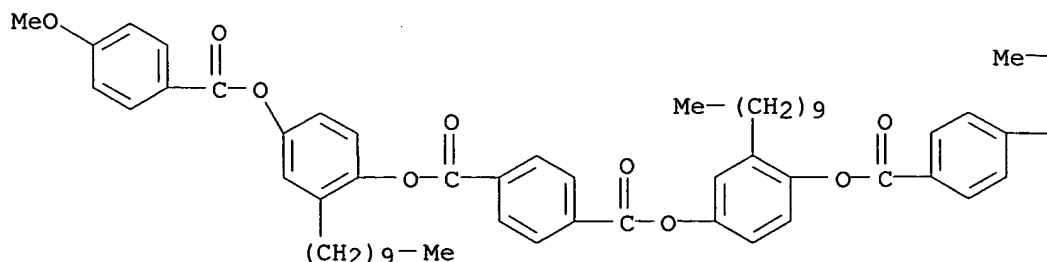
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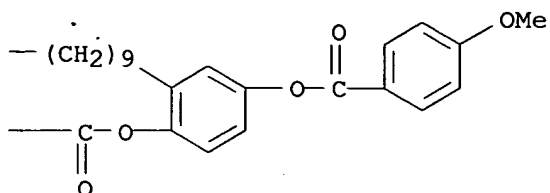
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of oligomeric alkylhydroquinone terephthalates)

RN 285554-01-0 CAPLUS

CN 1,4-Benzenedicarboxylic acid, 2-decyl-1,4-phenylene bis[2-decyl-4-[(4-methoxybenzoyl)oxy]phenyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A





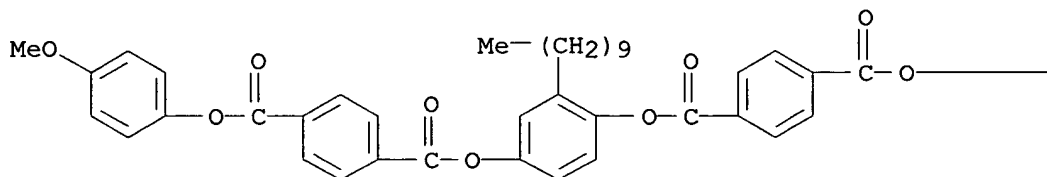
IT 285553-94-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of oligomeric alkylhydroquinone terephthalates)

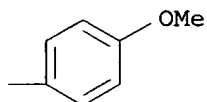
RN 285553-94-8 CAPLUS

CN 1,4-Benzenedicarboxylic acid, 2-decyl-1,4-phenylene bis(4-methoxyphenyl)
ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:600707 CAPLUS

DOCUMENT NUMBER: 127:270473

TITLE: Photoimageable, dielectric, crosslinkable copolyesters
INVENTOR(S): Economy, James; Schneggenburger, Elizabeth A.; Shi,
Fang

PATENT ASSIGNEE(S): Board of Trustees of the University of Illinois, USA

SOURCE: Eur. Pat. Appl., 11 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 793146	A1	19970903	EP 1997-103348	19970228 <--
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US 5707782	A	19980113	US 1996-609465	19960301 <--
CN 1162608	A	19971022	CN 1997-104860	19970227 <--
CA 2198786	AA	19970901	CA 1997-2198786	19970228 <--
JP 10010720	A2	19980116	JP 1997-62354	19970228 <--
PRIORITY APPLN. INFO.:			US 1996-609465	A 19960301

AB Photosensitive, dielec. insulating, crosslinkable copolyesters are used as
dielec. and photoresist films for microelectronic circuits which are also
suitable for use in producing multiple chip module laminate (MCML)
products. In various embodiments of the invention there are provided

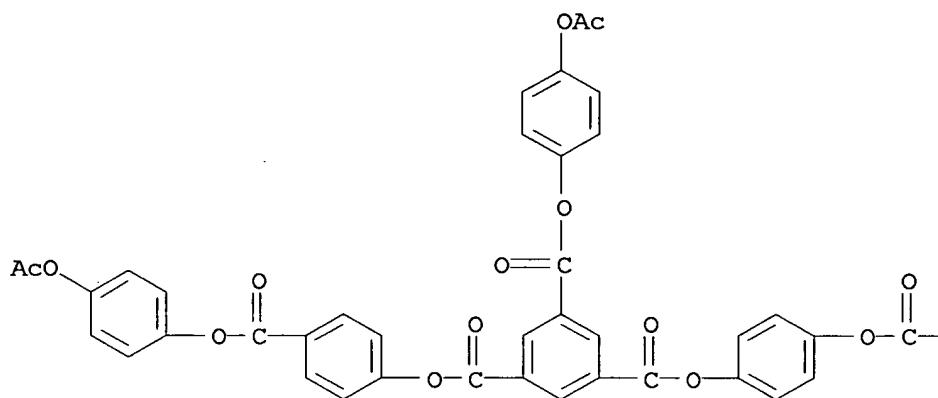
IT 196107-25-2

(photosensitive compns. for dielec. film formation and microelectronic circuit manufacture containing)

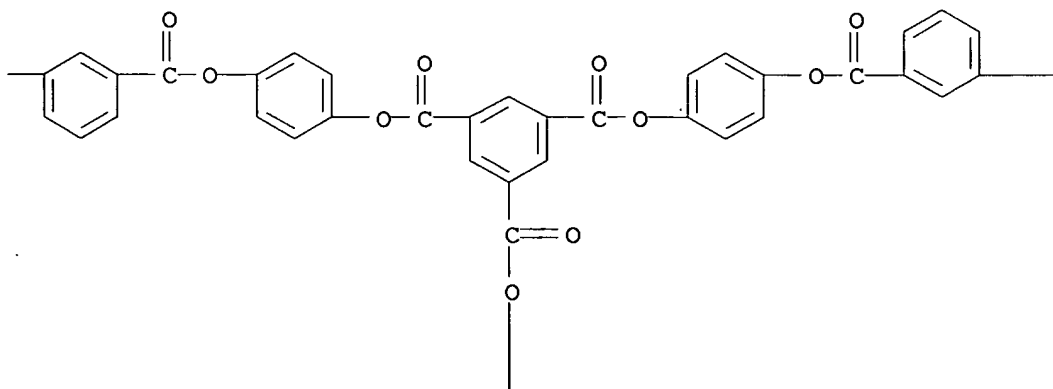
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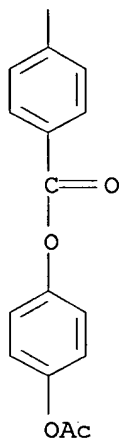
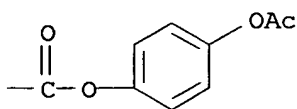
CN	1,3,5-Benzenetricarboxylic acid, 4-[[[3-[[4-[[3-[[4-(acetyloxy)phenoxy]carbonyl]-5-[[4-[[4-(acetyloxy)phenoxy]carbonyl]phenoxy]carbonyl]benzoyl]oxy]phenoxy]carbonyl]benzoyl]oxy]phenyl 4-[[3-[[4-(acetyloxy)phenoxy]carbonyl]benzoyl]oxy]phenyl 4-[[4-(acetyloxy)phenoxy]carbonyl]phenyl ester (9CI) (CA INDEX NAME)
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PAGE 1-A



PAGE 1-B





L12 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1994:216992 CAPLUS
 DOCUMENT NUMBER: 120:216992
 TITLE: Process for preparing antiviral polyurea oligomers
 INVENTOR(S): Cardin, Alan D.; Jackson, Richard L.; Mullins, Michael J.
 PATENT ASSIGNEE(S): Dow Chemical Co., USA; Merrell Dow Pharmaceuticals Inc.
 SOURCE: U.S., 19 pp. Cont.-in-part of U.S. Ser. No. 549,782, abandoned.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

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AU 635850	B2	19930401		
CA 2046491	AA	19920110	CA 1991-2046491	19910708 <--
FI 9103298	A	19920110	FI 1991-3298	19910708 <--
FI 108041	B1	20011115		
NO 9102672	A	19920110	NO 1991-2672	19910708 <--
NO 302827	B1	19980427		
EP 467185	A2	19920122	EP 1991-111315	19910708 <--
EP 467185	A3	19920909		
EP 467185	B1	19981021		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE

WO 9200749	A1	19920123	WO 1991-US4804	19910708 <--
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AU 9182867	A1	19920204	AU 1991-82867	19910708 <--
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HU 214876	B	19980728		
JP 06500535	T2	19940120	JP 1991-512671	19910708 <--
JP 3442072	B2	20030902		
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HU 72414	A2	19960429	HU 1995-533	19910708 <--
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AT 172477	E	19981115	AT 1991-111315	19910708 <--
ES 2124695	T3	19990216	ES 1991-111315	19910708 <--
KR 212336	B1	19990802	KR 1991-11531	19910708 <--
CA 2086438	C	20020312	CA 1991-2086438	19910708
JP 04226521	A2	19920817	JP 1991-168126	19910709 <--
JP 3187455	B2	20010711		
CZ 288574	B6	20010711	CZ 1991-2120	19910709
SK 283655	B6	20031104	SK 1991-2120	19910709
RU 2070554	C1	19961220	RU 1992-5052506	19920909 <--
RU 2102406	C1	19980120	RU 1992-5052865	19920909 <--
RU 2108345	C1	19980410	RU 1992-5052497	19920909 <--
US 6232349	B1	20010515	US 1993-965248	19930107
NO 9300052	A	19930309	NO 1993-52	19930108 <--
US 5606108	A	19970225	US 1993-132551	19931006 <--
US 5728874	A	19980317	US 1993-174597	19931227 <--
US 5547992	A	19960820	US 1995-407832	19950321 <--
US 5571505	A	19961105	US 1995-445158	19950519 <--
US 5670143	A	19970923	US 1995-445192	19950519 <--
US 5670144	A	19970923	US 1995-469390	19950606 <--
US 5728731	A	19980317	US 1995-469386	19950606 <--
NO 9601910	A	19920110	NO 1996-1910	19960510 <--
NO 306512	B1	19991115		
US 5707615	A	19980113	US 1997-834697	19970401 <--
PRIORITY APPLN. INFO.:			US 1990-549782	B2 19900709
			US 1991-710370	A 19910610
			HU 1991-2299	A 19910708
			NO 1991-2672	A 19910708
			WO 1991-US4804	A 19910708
			CS 1991-2120	A 19910709
			US 1993-965248	A3 19930107
			US 1993-132551	A3 19931006
			US 1995-444461	B1 19950519

AB Polyurea oligomers R(NHCO)m(NHXNHCO)nNHR3 [R = H, C1-4 alkyl, (un)substituted Ph; R3 = R, XNH2; X = (un)substituted phenylene, (un)substituted biphenyl, (un)substituted naphthylene, etc.; m = 0, 1; n = 3-50; such that when m = 0, then R = H], which demonstrate antiviral activity and are useful in the treatment of AIDS and ARC, are prepared by condensing an aromatic diamine with a difunctional electrophile in the presence of an acid acceptor in water or water with >1 mol of water-immiscible cosolvent at 0-100° and pH 7-9. Careful adjustment of the reactant stoichiometry or using a monofunctional end-capping agent produces a water-soluble polyurea oligomer having number-average mol. weight >10,000. Biol. testing data is presented.

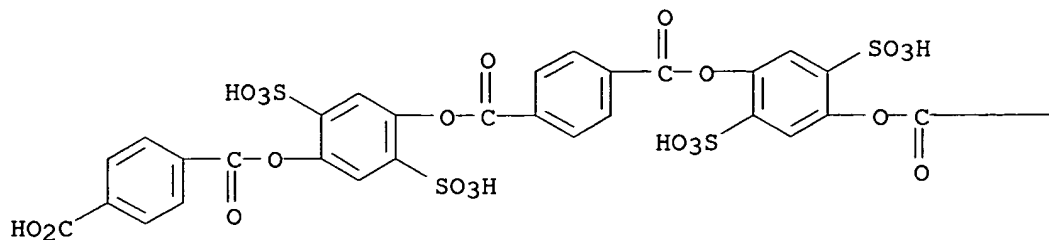
IT **141291-61-4P 154064-71-8P**
 RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of virucidal, for treatment of AIDS)

•RN 141291-61-4 CAPLUS

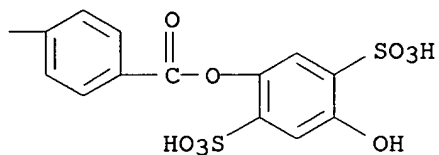
CN 1,4-Benzenedicarboxylic acid, 4-[(4-carboxybenzoyl)oxy]-2,5-disulfophenyl
4-[[4-[(4-hydroxy-2,5-disulfophenoxy)carbonyl]benzoyl]oxy]-2,5-
disulfophenyl ester, hexasodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● 6 Na

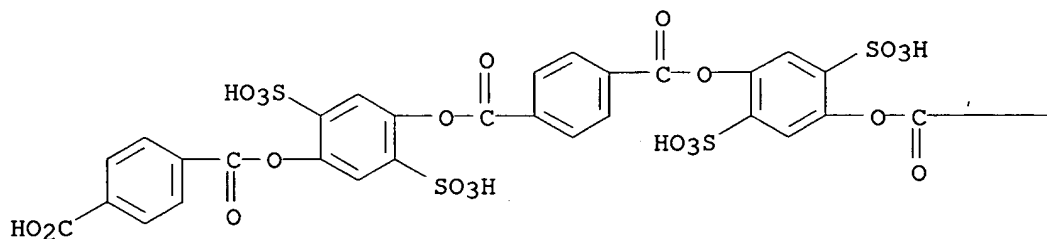
PAGE 1-B



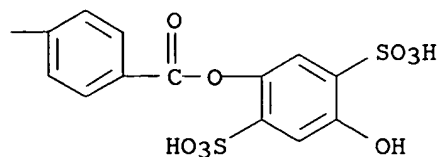
RN 154064-71-8 CAPLUS

CN 1,4-Benzenedicarboxylic acid, 4-[(4-carboxybenzoyl)oxy]-2,5-disulfophenyl
4-[[4-[(4-hydroxy-2,5-disulfophenoxy)carbonyl]benzoyl]oxy]-2,5-
disulfophenyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



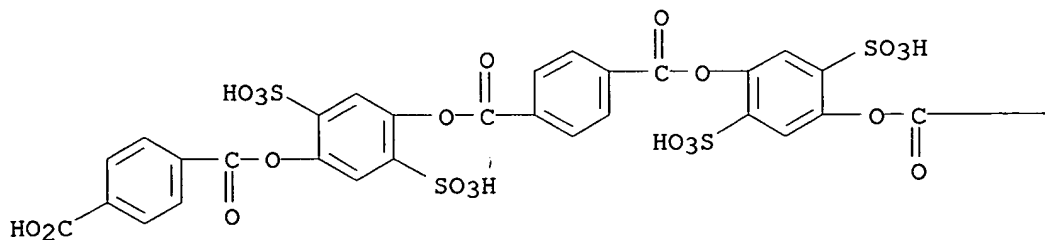
ACCESSION NUMBER: 1992:228231 CAPLUS
 DOCUMENT NUMBER: 116:228231
 TITLE: Synthetic oligomers for diagnosis and treatment of AIDS and AIDS-related complex
 INVENTOR(S): Cardin, Alan D.; Jackson, Richard L.; Mullins, Michael J.
 PATENT ASSIGNEE(S): Dow Chemical Co., USA; Merrell Dow Pharmaceuticals, Inc.
 SOURCE: Eur. Pat. Appl., 46 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

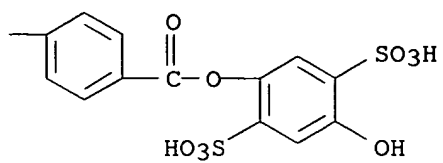
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 467185	A2	19920122	EP 1991-111315	19910708 <--
EP 467185	A3	19920909		
EP 467185	B1	19981021		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
US 5276182	A	19940104	US 1991-710370	19910610 <--
CZ 288574	B6	20010711	CZ 1991-2120	19910709
PRIORITY APPLN. INFO.:			US 1990-549782	A 19900709
			US 1991-710370	A 19910610
			CS 1991-2120	A 19910709

AB The title oligomers (Markush included) are preferably polyureas, polycarbonates, polyesters, or polyamides having an average mol. weight <10,000. The oligomers are water soluble, have a rigid backbone, have recurring units coupled by carbonyl linking moieties which have anionic groups, display predominantly linear geometry such that regular spacing between anionic groups exists in an aqueous medium, and are pharmaceutically acceptable. Preparation of reactants and oligomers is described, as is their activity against human immunodeficiency virus (syncytium formation and expression of P24 viral core antigen).

IT **141291-61-4P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, for AIDS and AIDS-related complex diagnosis and treatment)
 RN 141291-61-4 CAPLUS
 CN 1,4-Benzenedicarboxylic acid, 4-[(4-carboxybenzoyl)oxy]-2,5-disulfophenyl 4-[[4-[(4-hydroxy-2,5-disulfophenoxy)carbonyl]benzoyl]oxy]-2,5-disulfophenyl ester, hexasodium salt (9CI) (CA INDEX NAME)

PAGE 1-A





(FILE 'HOME' ENTERED AT 13:33:33 ON 27 APR 2005)

FILE 'CAPLUS' ENTERED AT 13:33:45 ON 27 APR 2005

L1 STRUCTURE UPLOADED
 S L1

FILE 'REGISTRY' ENTERED AT 13:34:05 ON 27 APR 2005

L2 50 S L1

FILE 'CAPLUS' ENTERED AT 13:34:06 ON 27 APR 2005

L3 50 S L2
L4 27 S L3 AND PY<2001
L5 19 S L4 AND POLYMERI?
L6 2 S L4 AND AMINO?
L7 21 S L5 OR L6
 S L1

FILE 'REGISTRY' ENTERED AT 13:40:51 ON 27 APR 2005

L8 5068 S L1 FULL

FILE 'CAPLUS' ENTERED AT 13:40:52 ON 27 APR 2005

L9 2160 S L8 FULL
L10 1594 S L9 AND PY<2001
L11 521 S L10 AND POLYMERI?
L12 31 S L11 AND AMINO?

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PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 FEB 25 CA/CAPLUS - Russian Agency for Patents and Trademarks
(ROSPATENT) added to list of core patent offices covered
NEWS 4 FEB 28 PATDPAFULL - New display fields provide for legal status
data from INPADOC
NEWS 5 FEB 28 BABS - Current-awareness alerts (SDIs) available
NEWS 6 FEB 28 MEDLINE/LMEDLINE reloaded
NEWS 7 MAR 02 GBFULL: New full-text patent database on STN
NEWS 8 MAR 03 REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS 9 MAR 03 MEDLINE file segment of TOXCENTER reloaded
NEWS 10 MAR 22 KOREAPAT now updated monthly; patent information enhanced
NEWS 11 MAR 22 Original IDE display format returns to REGISTRY/ZREGISTRY
NEWS 12 MAR 22 PATDPASPC - New patent database available
NEWS 13 MAR 22 REGISTRY/ZREGISTRY enhanced with experimental property tags
NEWS 14 APR 04 EPFULL enhanced with additional patent information and new
fields
NEWS 15 APR 04 EMBASE - Database reloaded and enhanced
NEWS 16 APR 18 New CAS Information Use Policies available online
NEWS 17 APR 25 Patent searching, including current-awareness alerts (SDIs),
based on application date in CA/CAPLUS and USPATFULL/USPAT2
may be affected by a change in filing date for U.S.
applications.

NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

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NEWS WWW CAS World Wide Web Site (general information)

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=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'CAPLUS' ENTERED AT 13:33:45 ON 27 APR 2005
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FILE COVERS 1907 - 27 Apr 2005 VOL 142 ISS 18
FILE LAST UPDATED: 26 Apr 2005 (20050426/ED)

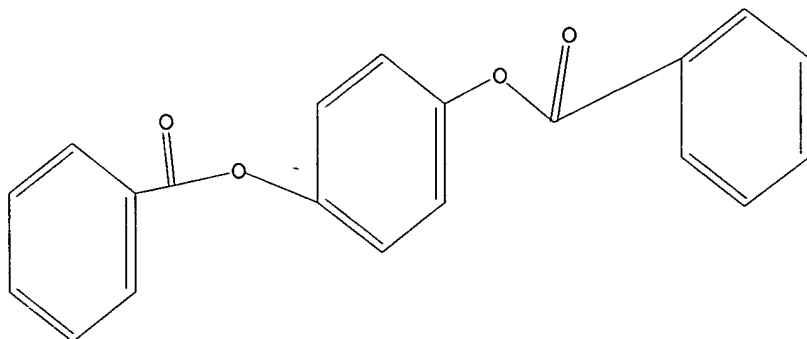
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=>
Uploading C:\Program Files\Stnexp\Queries\6121.str

L1 STRUCTURE UPLOADED

=> d
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

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REGISTRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

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SAMPLE SCREEN SEARCH COMPLETED - 2329 TO ITERATE

42.9% PROCESSED 1000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

50 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 43686 TO 49474
PROJECTED ANSWERS: 4459 TO 6439

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L3 50 L2

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533865 POLYMERI?

L5 19 L4 AND POLYMERI?

=> s l4 and amino?
1391600 AMINO?

L6 2 L4 AND AMINO?

=> s l5 or l6

L7 21 L5 OR L6

=> d 1-21 ibib abs hitstr

L7 ANSWER 1 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:755292 CAPLUS

DOCUMENT NUMBER: 133:323006

TITLE: Thermostable, liquid-crystalline pigments, films,
pearlescent coatings and **polymerizable**
mixtures for their preparation

INVENTOR(S): Kasch, Michael; Kupfer, Jorgen; Kreuzer,
Franz-Heinrich

PATENT ASSIGNEE(S): Consortium fuer Elektrochemische Industrie G.m.b.H.,
Germany

SOURCE: Eur. Pat. Appl., 12 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1046692	A1	20001025	EP 2000-106099	20000330 <--
EP 1046692	B1	20020807		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19917067	A1	20001019	DE 1999-19917067	19990415 <--
DE 19922158	A1	20001116	DE 1999-19922158	19990512 <--
PRIORITY APPLN. INFO.:			DE 1999-19917067	A 19990415
			DE 1999-19922158	A 19990512

AB Mixts. of **polymerizable** liquid-crystalline substances with chiral phase
and $\geq 90\%$ of the compds. having ≥ 2 **polymerizable**
groups, so that the **polymerizable** group content in the mixts. is
3.2-15 mol/g are useful for manufacture of heat-resistant, liquid-crystalline pigments
for pearlescent coatings. A typical pigment was manufactured by photopolymerization
of a mixture containing 23.93 g hydroquinone bis[4-(4-
acryloyloxybutoxy)benzoate], 6.6 g 4-acryloyloxyphenyl
4-(4-acryloyloxybutoxy)benzoate, 2.81 g 2-[4-(4-acryloyloxybutoxy)benzoyl]-
5-anisoylisosorbide, 10 mg Et3N, 0.09 g Ethanox 703, and 0.33 g Irgacure
819 as a 3-10- μ m-thick layer on PET film, removal of the layer, and
grinding.

IT 260544-92-1P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (pigment; thermostable, liquid-crystalline **polymeric** pigments for pearlescent coatings)

RN 260544-92-1 CAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[(1-oxo-2-propenyl)oxy]benzoate], polymer with 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI) (CA INDEX NAME)

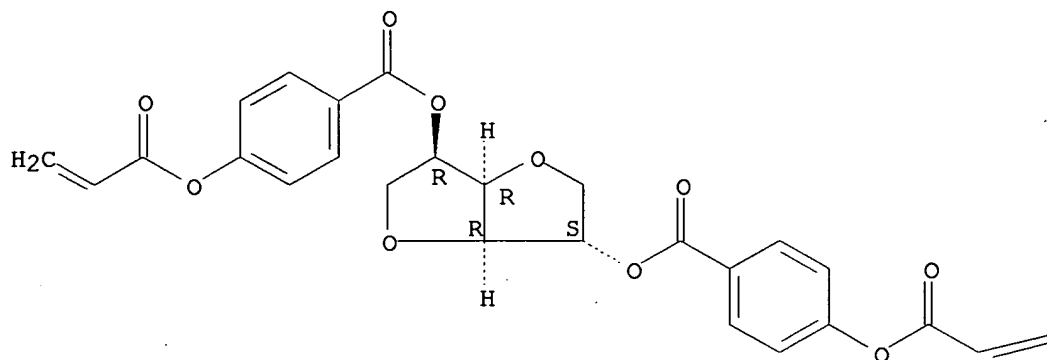
CM 1

CRN 256513-67-4

CMF C26 H22 O10

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

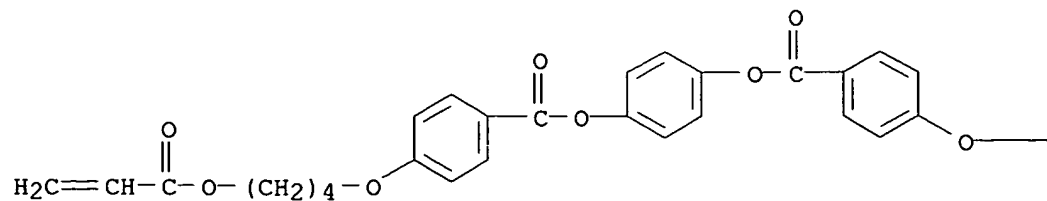
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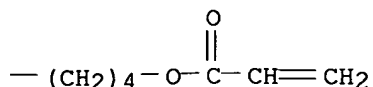
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CRN 132694-65-6

CMF C34 H34 O10

PAGE 1-A





REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:752424 CAPLUS

DOCUMENT NUMBER: 134:42464

TITLE: Cross-Linkable Liquid Crystal Monomers Containing Hydrocarbon 1,3-Diene Tail Systems

AUTHOR(S): Hoag, Benjamin P.; Gin, Douglas L.

CORPORATE SOURCE: Department of Chemistry, University of California, Berkeley, CA, 94720-1460, USA

SOURCE: Macromolecules (2000), 33(23), 8549-8558

CODEN: MAMOBX; ISSN: 0024-9297

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The unprecedented use of **polymerizable** hydrocarbon tail systems containing 1,3-diene groups for the design of thermotropic and lyotropic liquid crystal (LC) monomers is described. Cross-linkable LC dienes are synthesized by attaching LC core units to modular ω -bromoalka-1,3-diene tails of variable length. These modular diene tails are synthesized by the oxidation of long chain ω -bromoalkan-1-ols to the corresponding ω -bromoalkanal. Reaction of the ω -bromoalkanal with Matteson's reagent, followed by treatment with triethanolamine and deoxysilylation under Peterson elimination conditions, affords the desired ω -bromoalka-1,3-diene tails. The effect of the 1,3-diene group on the mesogenic behavior of certain thermotropic and lyotropic LC systems was determined by examining 1,3-diene analogs of a thermotropic calamitic LC diacrylate and a taper-shaped lyotropic LC triacrylate. Compared to their diacrylate analogs, the thermotropic LC bis(1,3-diene)s exhibit the same progression of nematic and smectic phases but with higher smectic C to nematic transition temps. and higher clearing temps. Replacement of the three acrylate groups in the tapered-shaped lyotropic LC monomer with 1,3-diene moieties had little effect on its tendency to form the inverted hexagonal phase at room temperature in the presence of water. The lyotropic LC diene phases also exhibit higher clearing temps. than the corresponding LC triacrylate. The 1,3-diene group was an efficient crosslinking unit for the photopolymerization of lyotropic LC phases at ambient temperature because of its hydrophobicity, minimal phase perturbation, and the high degree of photopolymerization. With thermotropic LC systems, however, Diels-Alder dimerization of adjacent diene units was found to occur upon heating the thermotropic LC bis(diene) monomers to ca. 90° or higher. Thus, as a photopolymerizable group in LC monomer design, the practical utility of the 1,3-diene group appears to be limited to temperature regimes below 90°.

IT 312958-59-1P

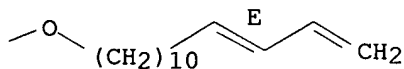
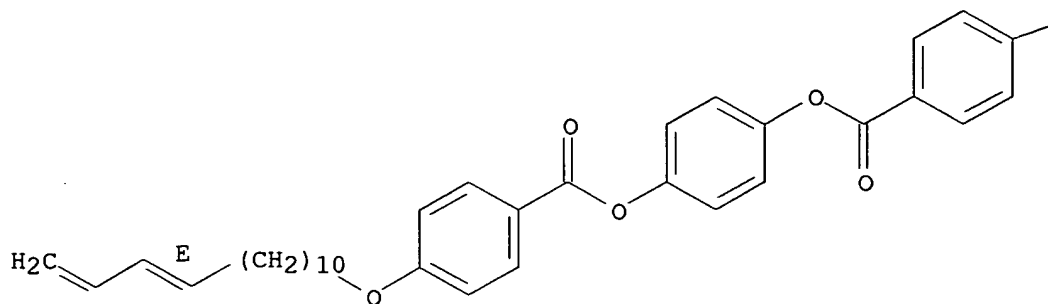
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(thermotropic liquid crystalline, monomer; preparation of crosslinkable liquid crystal monomers containing hydrocarbon 1,3-diene tail systems)

RN 312958-59-1 CAPLUS

CN Benzoic acid, 4-[(11E)-11,13-tetradecadienyloxy]-, 1,4-phenylene ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.



REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:593952 CAPLUS

DOCUMENT NUMBER: 133:296764

TITLE: Study on synthesis and lc behaviors of novel ternary polyurethanes

AUTHOR(S): Lian, Yanqing; Liu, Deshan; Zhou, Qixiang

CORPORATE SOURCE: Institute of Polymer Science and Engineering, Department of Chemical Engineering and Laboratory of Advanced Materials, Tsinghua University, Beijing, 100084, Peop. Rep. China

SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2000), 41(2), 1296-1297

CODEN: ACPPAY; ISSN: 0032-3934

PUBLISHER: American Chemical Society, Division of Polymer Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Nematic polyester-polyurethanes were prepared by terpolymn. of the hydroquinone diester of 4-hydroxybenzoic acid with 2,4-TDI (or MDI) and HO(CH2)nOH (n = 2-10). The effects of diisocyanate and diol structure on the phase transition temps. and textures of the products were discussed.

IT 301307-67-5P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and phase transition temps. of nematic polyester-polyurethanes)

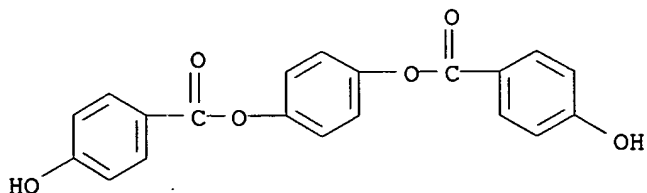
RN 301307-67-5 CAPLUS

CN Benzoic acid, 4-hydroxy-, 1,4-phenylene ester, polymer with 1,2-ethanediol and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

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CRN 53201-62-0

CMF C20 H14 O6



CM 2

CRN 107-21-1

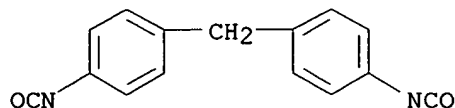
CMF C2 H6 O2

HO-CH₂-CH₂-OH

CM 3

CRN 101-68-8

CMF C15 H10 N2 O2



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:273781 CAPLUS

DOCUMENT NUMBER: 133:17928

TITLE: Synthesis and characterization of smectic C(Sc) phase liquid crystal polymers with mesogen laterally fixed onto the main chain. (II)

AUTHOR(S): Zhang, Shu-yuan; Ning, Chao-feng; Zheng, Shijun; Ma, Zhi; Li, Zifa; Zhou, Qi-feng

CORPORATE SOURCE: Institute of Chemistry and Chemical Engineering, Zhengzhou University, Zhengzhou, 450052, Peop. Rep. China

SOURCE: Gaofenzi Cailiao Kexue Yu Gongcheng (2000), 16(2), 18-22

CODEN: GCKGEI; ISSN: 1000-7555

PUBLISHER: Gaofenzi Cailiao Kexue Yu Gongcheng Bianjibu

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB A New series of smectic C phase liquid crystal polymers with mesogenic laterally fixed onto the main chain was synthesized via low temperature solution condensation polymerization from 2,5-bis(p-isoalkoxybenzoyloxy)hydroquinone and aliphatic chloride with different structure. The low mol. weight compds. were analyzed by elementary anal., IR, ¹H-NMR and MS. The polymers were characterized by GPC, DSC, TG, WAXD (wide-angle x-ray diffraction) and polarizing microscope with heating stage. All the polymers go to liquid crystal phase when heated to their melting temperature (T_m). The broken focal-conic texture can be observed. Temperature-variable X-ray diffraction realized that they are smectic C phase. Both T_m and T_i (clearing temperature of liquid crystal phase) of all the polymers decrease with the increase of the end alkoxy group length and the flexible spacer unit in the polymers gets longer, the liquid crystal temperature range of the polymers becomes narrow.

IT 272790-34-8P

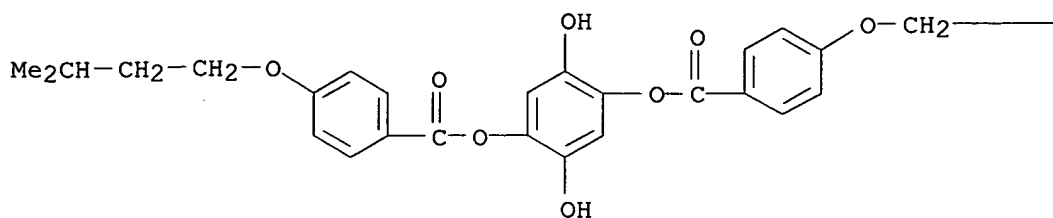
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(liquid crystalline; synthesis and characterization of smectic C(Sc) phase liquid crystal polymers with mesogen laterally fixed onto main chain)

RN 272790-34-8 CAPLUS

CN Benzoic acid, 4-(3-methylbutoxy)-, 2,5-dihydroxy-1,4-phenylene ester, polymer with decanedioyl dichloride (9CI) (CA INDEX NAME)

CM 1

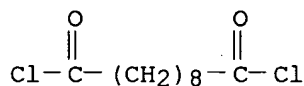
CRN 195156-64-0

—CH₂—CHMe₂

CM 2

CRN 111-19-3

CMF C10 H16 Cl2 O2



L7 ANSWER 5 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:114641 CAPLUS

DOCUMENT NUMBER: 132:158988

TITLE: **Polymerizable** composition comprising epoxy compounds

INVENTOR(S): Joliffie, Emma Jane; May, Alison Linda

PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany

SOURCE: Brit. UK Pat. Appl., 32 pp.

CODEN: BAXXDU

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2338240	A1	19991215	GB 1999-12054	19990524 <--
GB 2338240	B2	20020814		

PRIORITY APPLN. INFO.: EP 1998-109314 A 19980522

OTHER SOURCE(S): MARPAT 132:158988

AB A **polymerizable** composition containing mesogenic epoxy compds. is described which is useful for preparation of anisotropic polymers and anisotropic polymer films with strong adhesion to other films or substrates and which can even act as their own adhesive. The composition provides polymer films with good flexibility for use as decorative pigments, in security applications, electrooptical devices, color filters and adhesives. The composition includes the following components: (1) component A comprising ≥ 1 chiral **polymerizable** mesogenic compound having one terminal **polymerizable** epoxy group; (2) component B comprising ≥ 1 achiral **polymerizable** mesogenic compound having one terminal **polymerizable** epoxy group; (3) optionally component C comprising ≥ 1 **polymerizable** mesogenic compound having two or more terminal **polymerizable** epoxy groups; (4) optionally component D comprising ≥ 1

polymerizable non-mesogenic compds. having two or more terminal
 polymerizable epoxy groups; (5) optionally component E comprising
 ≥1 chiral dopants; (6) an initiator component F comprising
 ≥1 polymerization initiator.

IT 258278-35-2

RL: TEM (Technical or engineered material use); USES (Uses)

(photopolymerizable composition containing mesogenic epoxy compds. for preparation of
 anisotropic polymers and anisotropic polymer films)

RN 258278-35-2 CAPLUS

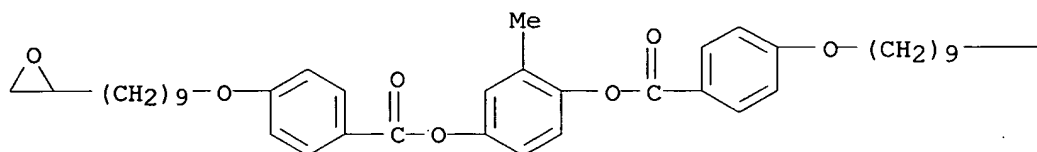
CN Benzoic acid, 4-[(9-oxiranylnonyl)oxy]-, 2-methyl-1,4-phenylene ester, ,
 mixt. with 4-methoxyphenyl 4-[(9-oxiranylnonyl)oxy]benzoate and
 4-(2-methylbutyl)phenyl 4-(oxiranylmethoxy)benzoate (9CI) (CA INDEX NAME)

CM 1

CRN 258278-34-1

CMF C43 H56 O8

PAGE 1-A



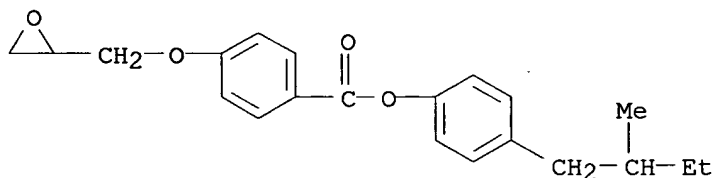
PAGE 1-B



CM 2

CRN 258278-33-0

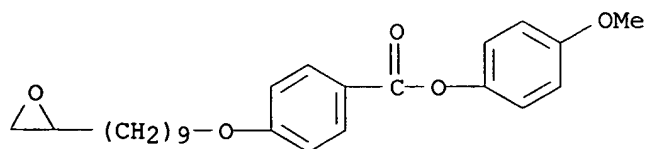
CMF C21 H24 O4



CM 3

CRN 144447-12-1

CMF C25 H32 O5



TITLE: Synthesis and characterization of novel chiral smectic C(Sc*) phase shish-kebab type liquid crystalline block copolymers

AUTHOR(S): Zheng, Shi-Jun; Li, Zi-Fa; Zhang, Shu-Yuan; Cao, Shao-Kui; Tang, Ming-Sheng; Fen, Qiu-Jun; Zhou, Qi-Feng

CORPORATE SOURCE: Department of Materials Engineering, Zhengzhou University, Zhengzhou, 450052, Peop. Rep. China

SOURCE: Chinese Journal of Polymer Science (1999), 17(6), 579-587
CODEN: CJPSEG; ISSN: 0256-7679

PUBLISHER: Springer-Verlag Singapore Pte. Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A new series of chiral shish-kebab type liquid crystal block copolymers that form the smectic C(Sc*) phase was synthesized by solution polycondensation from a chiral cyclohexenediol monomer synthesized from S-(-)-2-methyl-1-butanol. The copolymers were characterized by GPC, DSC, TGA, polarizing optical microscopy (POM), X-ray diffraction, and polarimetry. Copolymers incorporating terephthaloyl chloride and alkanediols entered into a liquid crystal phase when they were heated to their melting temps. (Tm), while copolymers based on sebacoyl chloride and polyethylene glycol were in a liquid crystal phase at room temperature with low viscosities. A smectic sanded texture or focal-conic texture were observed on POM. All the chiral block copolymers showed high optical activity. No racemization occurred. Temperature-variable X-ray diffraction study together with POM and polarimetric anal. showed the existence of a chiral smectic C(Sc*) phase. Thus we offer in this report the first example of shish-kebab type liquid crystal block copolymers that form a chiral smectic C(Sc*) phase. The variation of melting and isotropization temps. with mol. structure was also discussed.

IT 252959-57-2P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation of chiral smectic shish-kebab block polyesters)

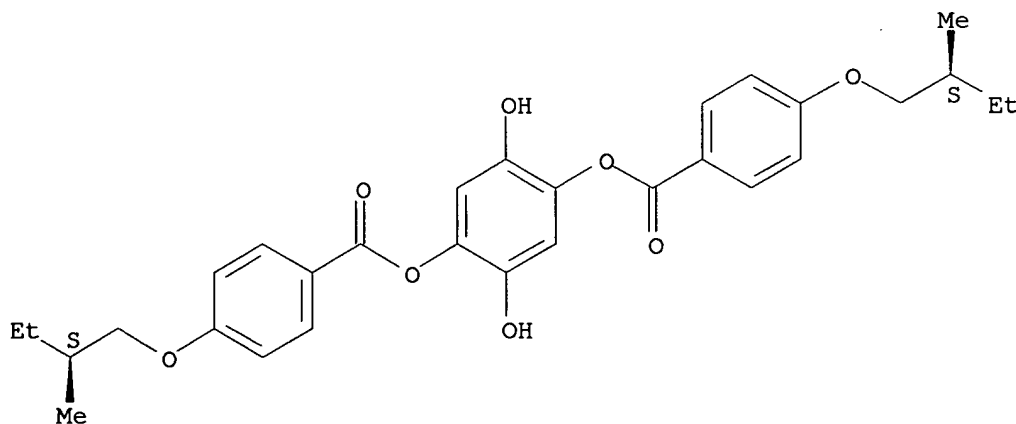
RN 252959-57-2 CAPLUS

CN Benzoic acid, 4-[(2S)-2-methylbutoxy]-, 2,5-dihydroxy-1,4-phenylene ester, polymer with 1,4-benzenedicarbonyl dichloride and 1,4-butanediol (9CI)
(CA INDEX NAME)

CM 1

CRN 133003-94-8
CMF C30 H34 O8

Absolute stereochemistry. Rotation (+).

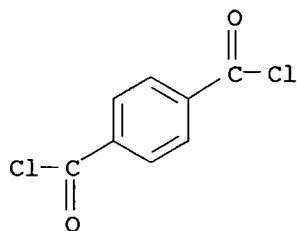


CM 2

CRN 110-63-4

HO-(CH₂)₄-OH

CM 3

CRN 100-20-9
CMF C8 H4 Cl2 O2

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 7 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:670134 CAPLUS

DOCUMENT NUMBER: 131:287827

TITLE: **Polymeric** vehicle containing oligoester
diols for high solids coatingsINVENTOR(S): Jones, Frank N.; Fu, Shou-kuan; Yuan, Xiaoying; Hua,
Jun; Swarup, Vijay

PATENT ASSIGNEE(S): Exxon Chemical Patents, Inc., USA

SOURCE: U.S., 28 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5969085	A	19991019	US 1997-966691	19971110 <--
PRIORITY APPLN. INFO.:			US 1997-966691	19971110

AB The title polymer comprises a blend of at least one nonmesogenic linear oligoester diol and at least one hardener which is a mesogenic polyol, phenolic ester alc., or crystalline polyol, and is crosslinked with the nonmesogenic oligoester and hardener. The vehicle comprises a blend (viscosity 0.1-20 Pa-s at 20-60° and shear rate .apprx.1000 s⁻¹) of ≥1 nonmesogenic, substantially linear oligoester diol (Mn 275-3000) and ≥1 hardener which is a mesogenic polyol (Mn 186-4000) or crystalline C5-200 polyol, the blend being reactive with a crosslinker.

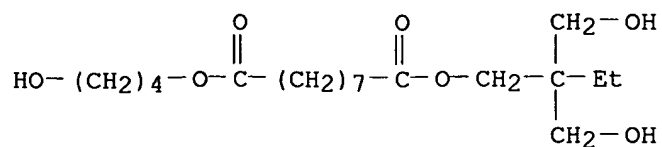
IT **246152-29-4P**RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or
engineered material use); PREP (Preparation); USES (Uses)(Polymeric vehicle containing oligoester diols for high solids
coatings)

RN 246152-29-4 CAPLUS

CN Nonanedioic acid, 2,2-bis(hydroxymethyl)butyl 4-hydroxybutyl ester,
polymer with formaldehyde, 1,4-phenylene bis[4-[2-hydroxy-3-[(1-
oxoneodecyl)oxy]propoxy]benzoate] and 1,3,5-triazine-2,4,6-triamine (9CI)
(CA INDEX NAME)

CM 1

CRN 246152-26-1



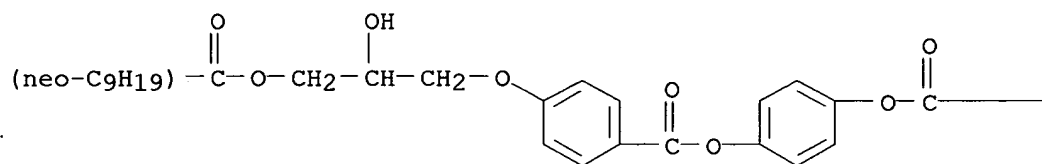
CM 2

CRN 192334-43-3

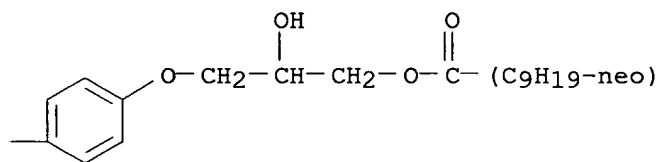
CMF C46 H62 O12

CCI IDS

PAGE 1-A



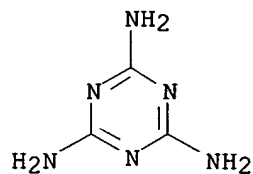
PAGE 1-B



CM 3

CRN 108-78-1

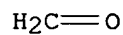
CMF C3 H6 N6



CM 4

CRN 50-00-0

CMF C H2 O



REFERENCE COUNT:

74

THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 1999:412516 CAPLUS
DOCUMENT NUMBER: 131:185613
TITLE: Synthesis and properties of phosphorus containing
copoly(bismaleimide)
AUTHOR(S): Wang, Chun Shan; Lin, Ching Hsuan
CORPORATE SOURCE: Department of Chemical Engineering, National Cheng
Kung University, Tainan, 701, Taiwan
SOURCE: Polymer (1999), 40(20), 5665-5673
CODEN: POLMAG; ISSN: 0032-3861
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A phosphorus containing bismaleimide (I) based on 2-(6-oxido-6H-dibenz(c,c)(1,2)6-yl)-1,4-dihydroxy phenylene was synthesized and copolymd. with 4,4'-bismaleimidodiphenylmethane (BMDM) in various weight ratio (0-33 phr). DSC scans show that the introduction of I into BMDM has increased the processing window for the resulted copoly(bismaleimide). DMA scans show these cured bismaleimides (BMIs) exhibit good modulus (.apprx. 2 GPa) up to 400°C. There is no tangent peak for these cured BMIs implying that there is no relaxation below 400°C. TMA scans show introduction of I into BMDM increase the coefficient of thermal expansion (CTE). However, CTE of these cured BMIs are less than 50 ppm, which is much less than common epoxy. There is no second transition during TMA heating scans up to 440°C, so Tgs of these cured BMIs are higher than 440°C, which is consistent with the DMA measurement. TGA heating scans also indicate that they have high thermal stability and their char yields increase with the content of I. Char yields at 800°C shift from 48 to 63 in nitrogen and from 0 to 18 in air when 25 phr of I as introduced into BMDM. TGA isothermal expts. show that these cured BMIs are thermally more stable in air than in nitrogen below 450°C. Char yields also increase with the content of I.

IT 239801-58-2P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(synthesis and properties of phosphorus containing copoly(bismaleimide))

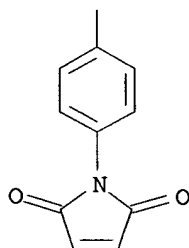
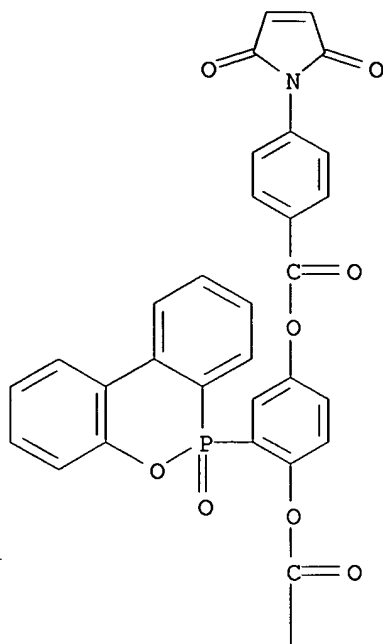
RN 239801-58-2 CAPLUS

CN Benzoic acid, 4-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)-, 2-(6-oxido-6H-dibenz[c,e][1,2]oxaphosphorin-6-yl)-1,4-phenylene ester, polymer with 1,1'-(methylenedi-4,1-phenylene)bis[1H-pyrrole-2,5-dione] (9CI) (CA INDEX NAME)

CM 1

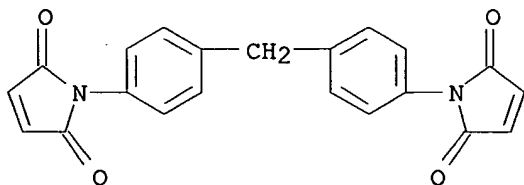
CRN 239801-57-1

CMF C40 H23 N2 O10 P



CM 2

CRN 13676-54-5
CMF C21 H14 N2 O4



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 9 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:310179 CAPLUS

DOCUMENT NUMBER: 131:102908

TITLE: Photo-induced diffusion during the formation of liquid-crystalline networks: a powerful tool to control polymer morphology down to nanoscale level

AUTHOR(S): Broer, D. J.; Lub, J.; Van Nostrum, C. F.; Wienk, M.

CORPORATE SOURCE: M. Philips Research Laboratories, Eindhoven, 5656AA, Neth.

SOURCE: Recent Research Developments in Polymer Science (1998), 2(Pt. 2), 313-324
CODEN: RRDPFX

PUBLISHER: Transworld Research Network

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Photo-initiated polymerization of liquid-crystalline [LC] monomers produces polymer films with a spatial control over the mol. organization. A powerful tool for creating even more complex mol. architectures than by LC order alone is photo-induced diffusion during polymerization of these monomers. Using UV light for initiation enables the modulation of the polymerization in space. Photomasks or holog. can modulate the light intensity in the film plane. This creates lateral concentration gradients in monomer blends based on reactivity differences and the evoking depletion of the most reactive monomer at the high intensity area. The induced diffusion causes local changes in properties. These property modulation becomes very large when during the formation of the structure a concentration-induced phase transition is passed. As an example the formation of an anisotropic holog. grating, consisting of alternating isotropic and oriented structures, is discussed. Also into the third dimension, perpendicular to the film plane, monomer diffusion can build up mol. structures during polymerization. Thereto light is modulated by the use of a dye, absorbing in the same region as the photoinitiator. The diffusion leads to a gradient in properties which for instance can be utilized to enhance the bandwidth of a cholesteric reflective film by a gradient in the mol. pitch over the film thickness. Both the lateral and the normal diffusion based structures will be discussed in this chapter.

IT **231963-62-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(photo-induced diffusion during formation of liquid-crystalline networks and a powerful tool to control polymer morphol. down to nanoscale level)

RN 231963-62-5 CAPLUS

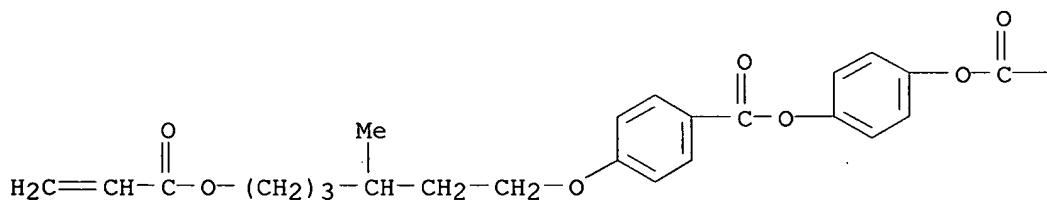
CN Benzoic acid, 4-[[3-methyl-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-, 1,4-phenylene ester, polymer with 1,4-phenylene bis[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate] (9CI) (CA INDEX NAME)

CM 1

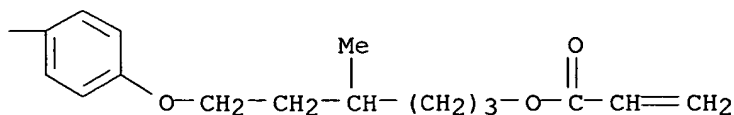
CRN 150809-89-5

CMF C40 H46 O10

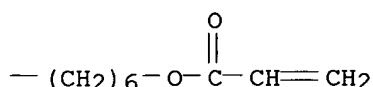
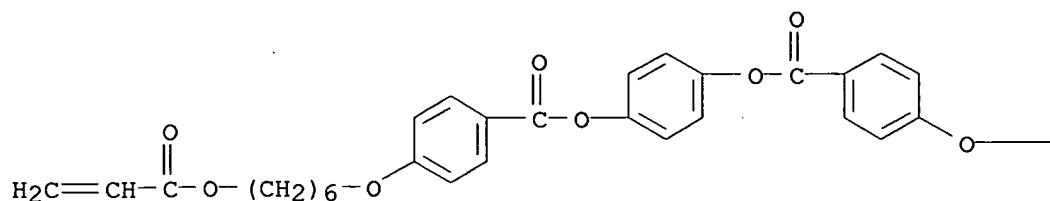
PAGE 1-A



PAGE 1-B



CM 2



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 10 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:254119 CAPLUS

DOCUMENT NUMBER: 130:312217

TITLE: **Polymerizable** chiral compounds and their application

INVENTOR(S): Meyer, Frank; Ishida, Hiroki; Schuhmacher, Peter

PATENT ASSIGNEE(S): BASF A.-G., Germany

SOURCE: Ger. Offen., 12 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19843724	A1	19990415	DE 1998-19843724	19980924 <--
CH 692985	A	20030115	CH 1998-1981	19980930
JP 11193287	A2	19990721	JP 1998-284040	19981006 <--
GB 2330139	A1	19990414	GB 1998-21817	19981007 <--
GB 2330139	B2	20020612		

PRIORITY APPLN. INFO.: DE 1997-19744321 A1 19971008

OTHER SOURCE(S): MARPAT 130:312217

AB Chiral monomers useful in electrooptical devices and as dopants for liquid crystals have the structure [ZY(A)mMY]nX [A = spacer; M = mesogenic group containing 2 (un)substituted phenylene groups linked by O, CO, CO2, O2C, or OCO2; X = chiral residue of THF or hexahydrofuro[3,2-b]furan; each Y = direct link, O, S, CO2, O2C, OCO2, CONR, NRCO (R = H, C1-4 alkyl); Z = **polymerizable** group; m = 0, 1; n = 2-6]. Thus, 1,4:3,6-dianhydrosorbitol bis(4-hydroxybenzoate) was esterified with 4-(acryloyloxy)butyl 4-(chloroformyl)phenyl carbonate in DMF containing cyclohexyldimethylamine to give a dextrorotatory diacrylate monomer in 96% yield with helical twisting power 63 μm^{-1} in ZLI 1840. Addition of various amts. of this monomer to various nematic compds. and mixts. gave compns. which reflected light at a wavelength which depended on the amount added.

IT 223585-43-1

RL: TEM (Technical or engineered material use); USES (Uses)

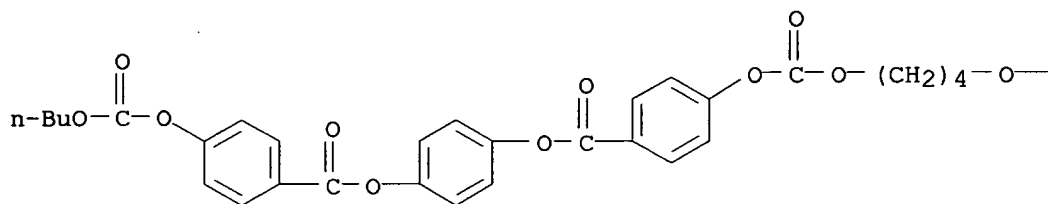
(nematic compound mixts. containing **polymerizable** mesogenic chiral

comps.)
 RN 223585-43-1 CAPLUS
 CN Benzoic acid, 4-[(butoxycarbonyl)oxy]-, 2-methyl-1,4-phenylene ester,
 mixt. with methyl-4-[[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]be
 nzoyl]oxy]phenyl 4-[(butoxycarbonyl)oxy]benzoate and 2-methyl-1,4-
 phenylene bis[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoate]
 (9CI) (CA INDEX NAME)

CM 1

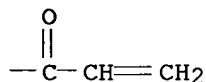
CRN 223585-42-0
 CMF C34 H34 O12
 CCI IDS

PAGE 1-A



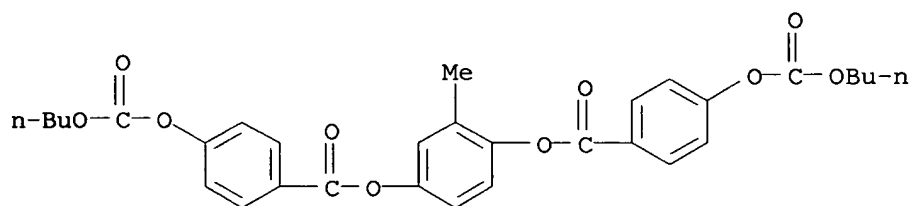
D1-Me

PAGE 1-B



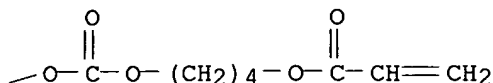
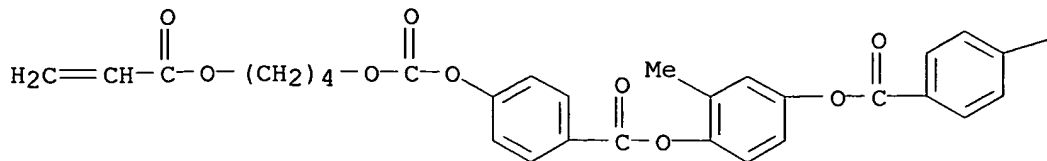
CM 2

CRN 187586-33-0
 CMF C31 H32 O10



CM 3

CRN 187585-64-4
 CMF C37 H36 O14



L7 ANSWER 11 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:36761 CAPLUS

DOCUMENT NUMBER: 130:182849

TITLE: Liquid crystalline main chain polysiloxane esters and their monomers: part II: synthesis and thermal behavior of polysiloxane esters with linear and tilted aromatic ester moieties

AUTHOR(S): Kossmehl, G.; Gerecke, B.; Harmsen, N.; Vieth, H. M.; Wolff, D.

CORPORATE SOURCE: Institut für Organische Chemie der Freien Universität Berlin, Berlin, 14195, Germany

SOURCE: Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals (1998), 317, 1-21
CODEN: MCLCE9; ISSN: 1058-725X

PUBLISHER: Gordon & Breach Science Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Liquid crystalline main chain polysiloxane esters have been formed by reacting bis[4-(ω -alkenyloxy)benzoic acid] esters containing 1,4-phenylene, 4,4'-biphenyldiyl, 2,7-fluorenediyl, and 2,7-fluorenonediyl units with α,ω -di-H-oligo(dimethylsiloxane)s. The chemical structure has been confirmed by elemental analyses, IR, ^1H -NMR and ^{13}C -NMR spectroscopy. Mol. wts. have been measured by GPC. The thermal behavior has been studied by polarizing microscopy and by DSC. In general the phase transitions are lower with a decreasing length of the alkylene spacers and with an increasing number of siloxane units within the spacer while they increase with magnification of the mesogenic groups. X-ray diffraction measurements for one polymer confirmed the type of the liquid crystalline phases (N, SC, SF). Deuteration has no influence on the thermal behavior.

IT 220693-53-8P 220693-87-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis and thermal behavior of liquid crystalline polyester-polysiloxanes with linear and tilted aromatic ester moieties)

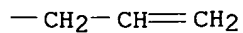
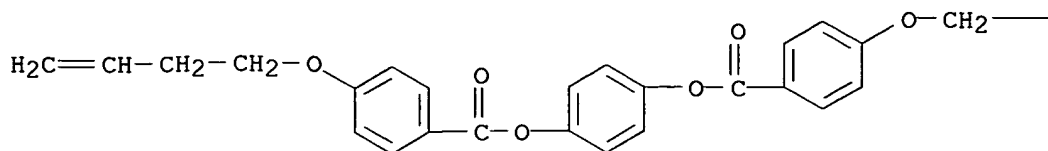
RN 220693-53-8 CAPLUS

CN Benzoic acid, 4-(3-butenyloxy)-, 1,4-phenylene ester, polymer with 1,1,3,3,5,5,7,7-octamethyltetrasiloxane (9CI) (CA INDEX NAME)

CM 1

CRN 169391-47-3

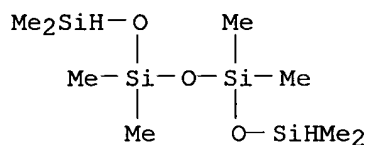
CMF C28 H26 O6



CM 2

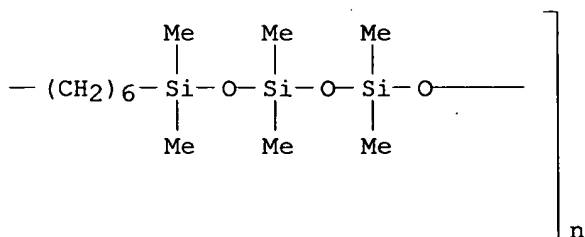
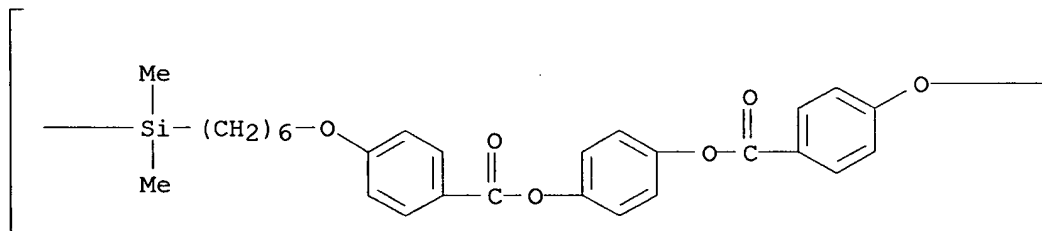
CRN 1000-05-1

CMF C8 H26 O3 Si4



RN 220693-87-8 CAPLUS

CN Poly[oxy(1,1,3,3,5,5-hexamethyl-1,5-trisiloxanediyl)-1,6-hexanediyl]oxy-1,4-phenylenecarbonyloxy-1,4-phenyleneoxycarbonyl-1,4-phenyleneoxy-1,6-hexanediyl(dimethylsilylene)] (9CI) (CA INDEX NAME)



REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 12 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:723850 CAPLUS

DOCUMENT NUMBER: 129:331179

TITLE: Preparation of crosslinked macroscopically oriented

INVENTOR(S): polymers
 HIKMET, Rifat Ata Mustafa; LUB, Johan
 PATENT ASSIGNEE(S): Koninklijke Philips Electronics N.V., Neth.; Philips
 AB
 SOURCE: PCT Int. Appl., 23 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9849253	A1	19981105	WO 1998-IB395	19980319 <--
W: JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 939795	A1	19990908	EP 1998-907094	19980319 <--
EP 939795	B1	20030604		
R: DE, FR, GB				
JP 2000515201	T2	20001114	JP 1998-529354	19980319 <--
US 6171518	B1	20010109	US 1998-64209	19980422
PRIORITY APPLN. INFO.:			EP 1997-201301	A 19970429
			WO 1998-IB395	W 19980319

AB The invention relates to a method of preparing an oriented crosslinked polymer, which comprises the steps of orienting and polymerizing a liquid-crystal composition. The liquid-crystal composition comprises a monomer which reduces the order during polymerization. This makes it possible to obtain oriented crosslinked polymers having a low degree of optical anisotropy and optical elements having a relatively low degree of scattering.

IT **215304-92-0P**

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of crosslinked macroscopically oriented polymers)

RN 215304-92-0 CAPLUS

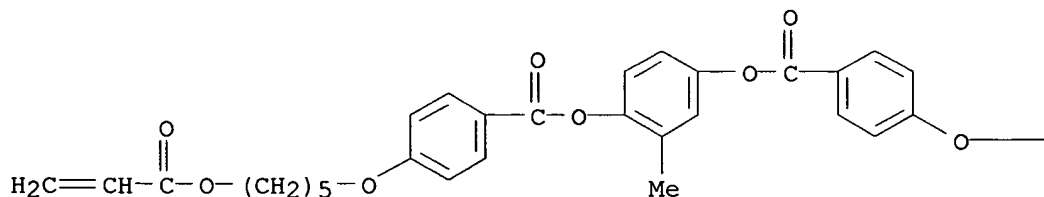
CN Benzoic acid, 4-[(1-oxo-2-propenyl)oxy]-, 4-[(1-oxo-2-propenyl)oxy]phenyl ester, polymer with 2-methyl-1,4-phenylene bis[4-[[5-[(1-oxo-2-propenyl)oxy]pentyl]oxy]benzoate] (9CI) (CA INDEX NAME)

CM 1

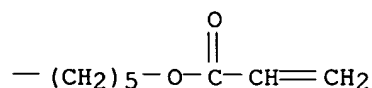
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CMF C37 H40 O10

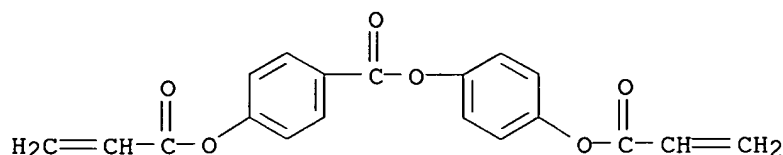
PAGE 1-A



PAGE 1-B



CM 2



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 13 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:716282 CAPLUS
DOCUMENT NUMBER: 129:331192
TITLE: Propargyl group-terminated, nematic or cholesteric polymers
INVENTOR(S): Schuhmacher, Peter; Kricheldorf, Hans R.; Gerken, Andreas
PATENT ASSIGNEE(S): BASF A.-G., Germany
SOURCE: Ger. Offen., 30 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19717371	A1	19981029	DE 1997-19717371	19970424 <--
PRIORITY APPLN. INFO.:			DE 1997-19717371	19970424

OTHER SOURCE(S): MARPAT 129:331192

AB The title polymers (polyesters and/or polycarbonates), with specified structures and thermally curable, especially useful in coatings (no data), are prepared A 5:95 mixture of isosorbide bis[(4'-propargyloxy)-4-biphenylcarboxylate] and 2-methylhydroquinone bis[(4'-propargyloxy)-4-biphenylcarboxylate] was crosslinkable in the liquid-crystalline phase and gave enantiotropic, cholesteric melts with Grandjean texture reddish-blue and yellow before and after crosslinking, resp.

IT **215245-15-1P**
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(propargyl group-terminated, nematic or cholesteric polymers)

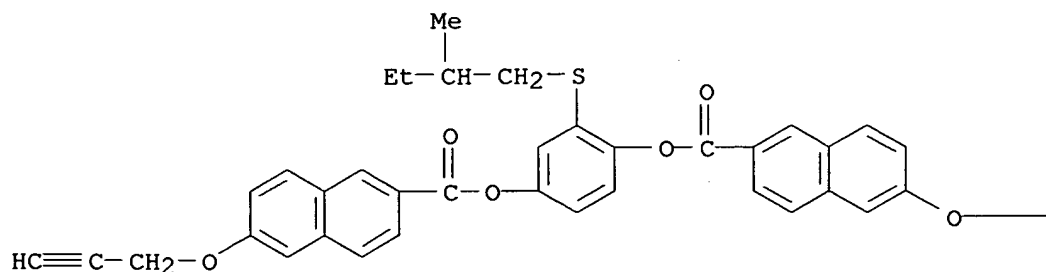
RN 215245-15-1 CAPLUS

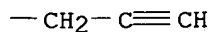
CN 2-Naphthalenecarboxylic acid, 6-(2-propynyloxy)-, 2-[(2-methylbutyl)thio]-1,4-phenylene ester, polymer with 1,4-phenylene bis[6-(2-propynyloxy)-2-naphthalenecarboxylate] (9CI) (CA INDEX NAME)

CM 1

CRN 215245-13-9
CMF C39 H32 O6 S

PAGE 1-A

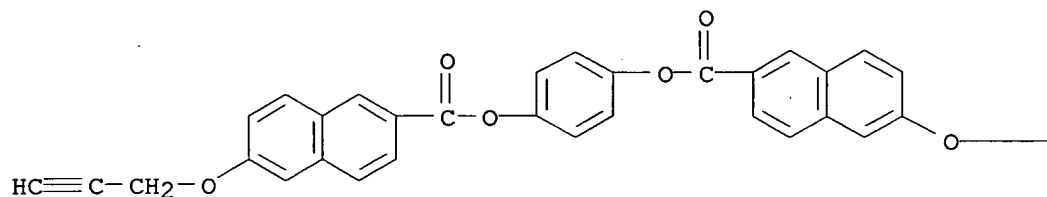




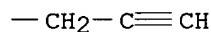
CM 2

CRN 193631-30-0
CMF C34 H22 O6

PAGE 1-A



PAGE 1-B



L7 ANSWER 14 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:668107 CAPLUS

DOCUMENT NUMBER: 129:308882

TITLE: Use of compounds as liquid-crystal polymers and preparation of the polymers

INVENTOR(S): Dannenhauer, Fritz; Gailberger, Michael; Holdik, Karl; Strelzyk, Katja; Kurschner, Kathrin; Stohr, Andreas; Strohmriegl, Peter

PATENT ASSIGNEE(S): Daimler-Benz A.-G., Germany

SOURCE: Eur. Pat. Appl., 23 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 869112	A1	19981007	EP 1998-104771	19980317 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19714119	A1	19981008	DE 1997-19714119	19970405 <--
JP 10310612	A2	19981124	JP 1998-128024	19980403 <--
US 6303050	B1	20011016	US 1999-465776	19991217
PRIORITY APPLN. INFO.:			DE 1997-19714119	A 19970405
			US 1998-55303	B3 19980406

AB Monomers for preparing cholesteric liquid-crystal polymers having nematic

phases are described. The synthesis of some benzoic acid hydroxyphenyl ester derivs. is described.

IT 214398-35-3P

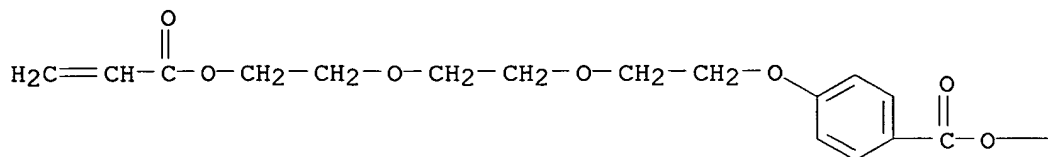
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of; for preparing cholesteric liquid-crystal polymers having nematic phases)

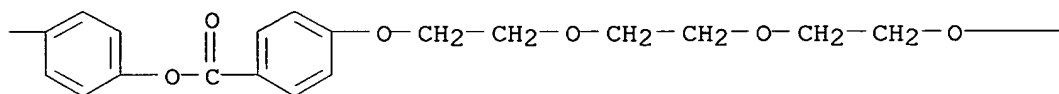
RN 214398-35-3 CAPLUS

CN Benzoic acid, 4,4'-[oxybis(2,1-ethanediyl oxy-2,1-ethanediyl oxy)]bis-, bis[4-[[4-[2-[2-[2-[(1-oxo-2-propenyl)oxy]ethoxy]ethoxy]ethoxy]benzoyl]oxy]phenyl] ester (9CI) (CA INDEX NAME)

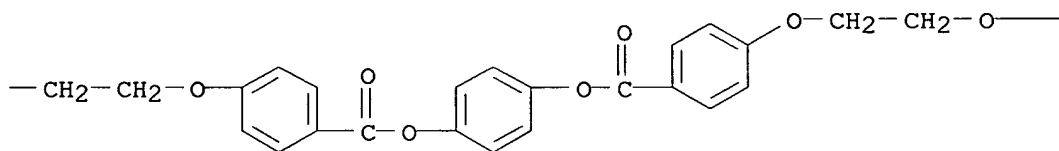
PAGE 1-A



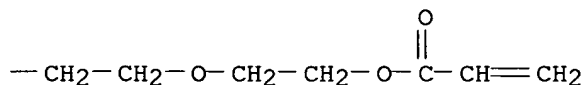
PAGE 1-B



PAGE 1-C



PAGE 1-D



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 15 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:614817 CAPLUS

DOCUMENT NUMBER: 129:290482

TITLE: Relationship between chemical structure and properties for mesogen-jacketed liquid crystal polymers

AUTHOR(S): Wan, Xin-Hua; Zhou, Qi-Feng; Zhang, Dong; Zhang, Yong; Feng, Xin-De

CORPORATE SOURCE: Dep. Polymer Sci. & Engineering, College Chem., Peking

SOURCE:

Univ., Beijing, 100871, Peop. Rep. China
Gaodeng Xuexiao Huaxue Xuebao (1998), 19(9),
1507-1512

CODEN: KTHPDM; ISSN: 0251-0790

PUBLISHER:

Gaodeng Jiaoyu Chubanshe

DOCUMENT TYPE:

Journal

LANGUAGE:

Chinese

AB Seven novel mesogen-jacketed liquid crystal polymers and their monomers were designed and synthesized. Effects of chemical structure and steric features on liquid crystalline phase forming were studied. The introduction of polar or polarizable group at the end of the mesogen units could increase the m.p. and clear point of monomers. The m.p. and clear point of the polymers increased with increasing axial ratio of mesogen units. The stability of liquid crystalline phase was enhanced by polymerization. The glass temperature of the polymers

increased with increasing polarity, rigidity and steric requirement of the mesogen units. The amide group can increase the m.p. of monomers and glass transition temperature of the polymers no matter it was used as the end group or linkage of the mesogen units. However, the stability of liquid crystalline phase was increased by the amide end groups and decreased by the amide linkages.

IT 214218-12-9P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(liquid crystal; preparation, chemical structure, phase morphol., and thermal properties mesogen-jacketed liquid-crystalline styrene derivative copolymers)

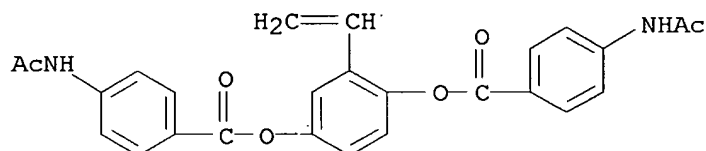
RN 214218-12-9 CAPLUS

CN Benzoic acid, 4-(acetyl-amino)-, 2-ethenyl-1,4-phenylene ester, homopolymer
(9CI) (CA INDEX NAME)

CM 1

CRN 214218-01-6

CMF C26 H22 N2 O6



L7 ANSWER 16 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:227343 CAPLUS

DOCUMENT NUMBER: 128:283160

TITLE: Liquid crystalline block copolymers having branched
mesogenic groups and non-liquid crystalline blocks,
and manufacture thereof

INVENTOR(S): Imai, Masaru; Frings, Rainer

PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE:

Patent

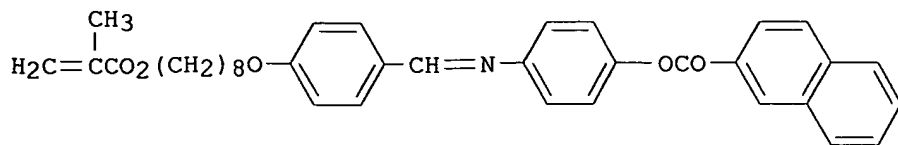
LANGUAGE:

Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10095821	A2	19980414	JP 1996-254452	19960926 <--
PRIORITY APPLN. INFO.: GI			JP 1996-254452	19960926



I

AB Title copolymers having branched mesogenic groups containing 3-5 aromatic rings and showing isotropization temperature (Ti) 200-400° and liquid crystal temperature range ≥80°, useful as polymer reinforcing agents and compatibilizers, are manufactured by photopolymerization of monomers using thermally decomposable photopolymer. initiators, then thermal polymerization of liquid crystalline polymers (sic) with the resulting macroinitiators having thermally reactive groups. Poly(Me methacrylate) macroinitiator was reacted with liquid crystalline monomer I at 95° for 60 h in a sealed tube to give 53:47 I-Me methacrylate block copolymer with Ti .apprx.260° and Tm .apprx.165°.

IT 205674-60-8P

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(manufacture of liquid crystalline block copolymers for polymer reinforcing agents and compatibilizers)

RN 205674-60-8 CAPLUS

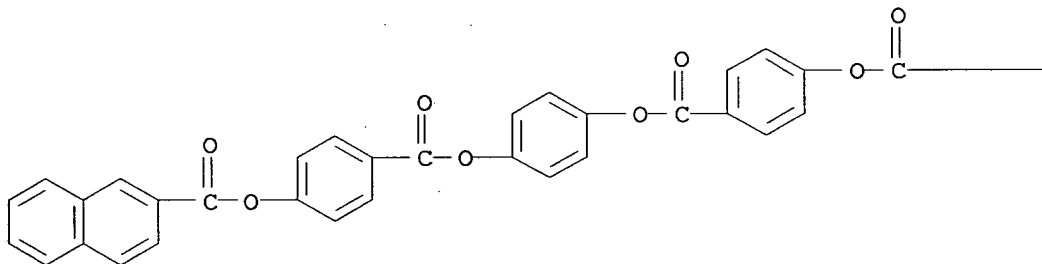
CN 1H-Pyrrole-1-hexanoic acid, 2,5-dihydro-2,5-dioxo-, 4-[[4-[[4-[(2-naphthalenylcarbonyl)oxy]benzoyl]oxy]phenoxy]carbonyl]phenyl ester, polymer with methyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

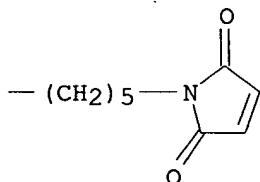
CRN 205674-59-5

CMF C41 H31 N O10

PAGE 1-A



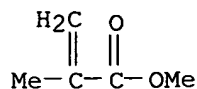
PAGE 1-B



CM 2

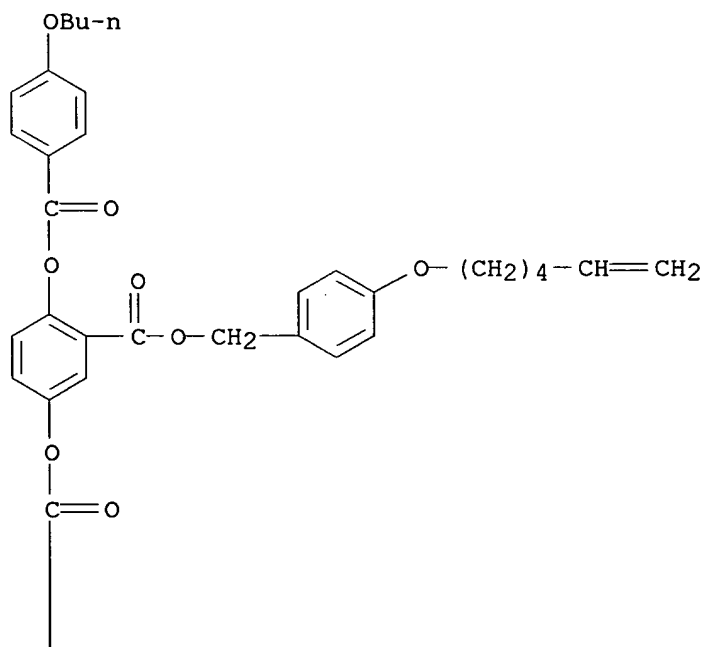
CRN 80-62-6

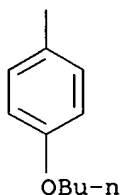
CMF C5 H8 O2



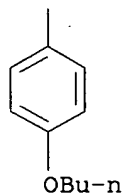
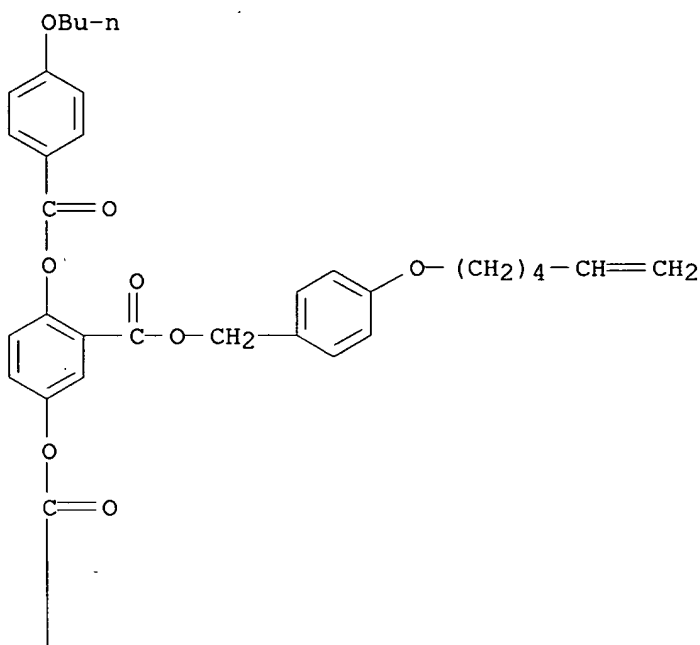
L7 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1998:219088 CAPLUS
 DOCUMENT NUMBER: 128:271087
 TITLE: Depression of mesophase stability caused by
polymerization
 AUTHOR(S): Jacobi, A.; Pirwitz, G.; Weissflog, W.
 CORPORATE SOURCE: Max Planck Research Unit Liquid Crystalline Systems at
 the Martin Luther University, Halle, 06108, Germany
 SOURCE: Proceedings of SPIE-The International Society for
 Optical Engineering (1998), 3319(Liquid
 Crystals: Chemistry and Structure), 249-255
 CODEN: PSISDG; ISSN: 0277-786X
 PUBLISHER: SPIE-The International Society for Optical Engineering
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Side-on polysiloxanes bearing laterally branched mesogens were
 synthesized. The mesogens have a bulky lateral branch containing an aromatic
 ring with an alkenyl chain in the p-position, which enables coupling to
 the polysiloxane backbone. Surprisingly, reaction with poly(hydrogen Me
 siloxane) can cause an increase or decrease of the clearing temps. The
 dimension of the mesophase destabilization was up to 27 K. By systematic
 investigations of this unusual effect, a clear dependence on steric
 proportions was proven. Especially, the relation of the length of the terminal
 alkyl chains and the length of the flexible aliphatic spacer is of great
 influence.
 IT **205689-75-4DP**, reaction products with poly(hydrogen Me siloxane)
205689-75-4P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (depression of mesophase stability caused by coupling to poly(hydrogen
 Me siloxane))
 RN 205689-75-4 CAPLUS
 CN Benzoic acid, 2,5-bis[(4-butoxybenzoyl)oxy]-, [4-(5-
 hexenyloxy)phenyl]methyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

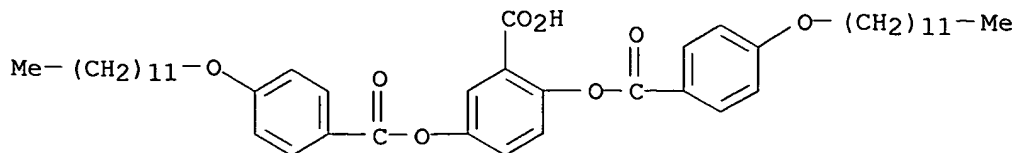




RN 205689-75-4 CAPLUS
 CN Benzoic acid, 2,5-bis[(4-butoxybenzoyl)oxy]-, [4-(5-hexenyloxy)phenyl]methyl ester (9CI) (CA INDEX NAME)



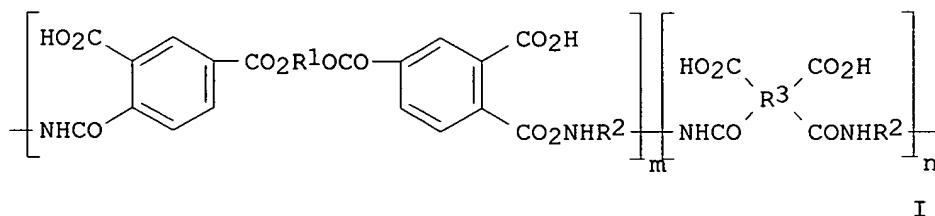
IT 205689-95-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (intermediate for mesogen; depression of mesophase stability caused by coupling to poly(hydrogen Me siloxane))
 RN 205689-95-8 CAPLUS
 CN Benzoic acid, 2,5-bis[[4-(dodecyloxy)benzoyl]oxy]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 18 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1998:154759 CAPLUS
 DOCUMENT NUMBER: 128:277945
 TITLE: FC tapes and TAB tapes employing intrinsic polyimide base films in assembling semiconductor devices
 INVENTOR(S): Okada, Koji
 PATENT ASSIGNEE(S): Kanegafuchi Chemical Industry Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10070157	A2	19980310	JP 1996-224737	19960827 <--
PRIORITY APPLN. INFO.: GI			JP 1996-224737	19960827



AB The base films laminated in FC tapes (protective/adhesive/insulative-base film laminates) employed in tape-automatic-bonding (TAB) for assembling semiconductor devices are made from polyimide block copolymers I (R1 = divalent organic group m; R2 = divalent organic groups selected from phenylene, biphenylene, and naphthalenediyl, unsubstituted or substituted by Me, Cl, Br, F, MeO-; R3 = tetravalent organic group; m,n are integers) which has low thermal expansion, low moisture-absorption, and low moisture-caused expansion. The semiconductor devices and circuits are patterned by laminating a Cu film and patterning the Cu film on the FC tapes after delamination of the base film by TAB process. The polyamide film provides the FC tapes in TAB processing with an expansion coefficient equivalent to that of metal and glass and with a modulus of elasticity high enough in prevention of warping and curling for precision fabrication of semiconductor devices and integrated circuits.

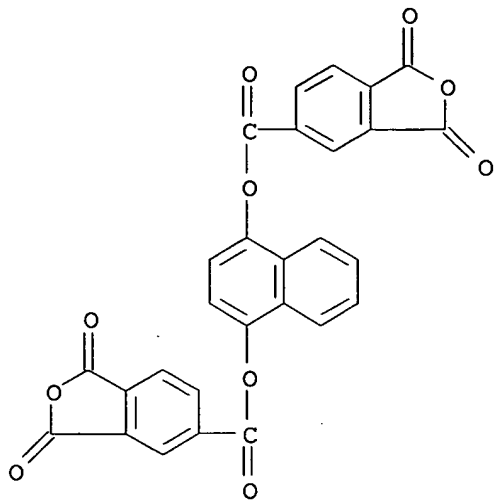
IT 203644-89-7P

RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(FC tapes and TAB tapes employing intrinsic polyimide base films in assembling semiconductor devices)

RN 203644-89-7 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-naphthalenediyl ester (9CI) (CA INDEX NAME)



L7 ANSWER 19 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:806578 CAPLUS

DOCUMENT NUMBER: 128:48764

TITLE: Synthesis and characterization of a series of liquid crystal polymers with X-shaped two-dimensional mesogenic units

AUTHOR(S): Li, Z. f.; Li, L.; Zhang, S. Y.; Cao, S. K.; Zhou, Q. F.

CORPORATE SOURCE: Department of Materials Engineering, Zhengzhou University, Zhengzhou, 450052, Peop. Rep. China

SOURCE: Polymers for Advanced Technologies (1997), 8(11), 674-682

CODEN: PADTE5; ISSN: 1042-7147

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Liquid crystal polymers (LCPs) with X-shaped two-dimensional mesogenic units were prepared via low temperature solution polycondensation of 4,4'-(α,ω -alkylenedioxy)dibenzoyl dichlorides and 2,5-bis(p-alkoxy benzoyloxy)-hydroquinones. The liquid crystalline behavior of the polymers was studied using DSC, polarized microscopy and x-ray diffraction. All the polymers show nematic thermotropic liquid crystalline structure, the melting temperature T_m and isotropization temperature T_i vary with the length of the flexible spacer and of the side groups. In the liquid crystal phase, a threaded texture was observed for the quinone and hydroquinone moieties, and a nematic schlieren texture with a high strength singularity was also observed in the hydroquinone polymers.

IT **200124-98-7P**

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and liquid crystal structure and phase transition temps. of alkylenedioxydibenzoyl-alkoxy-benzoyloxy hydroquinone polyesters with X-shaped mesogens)

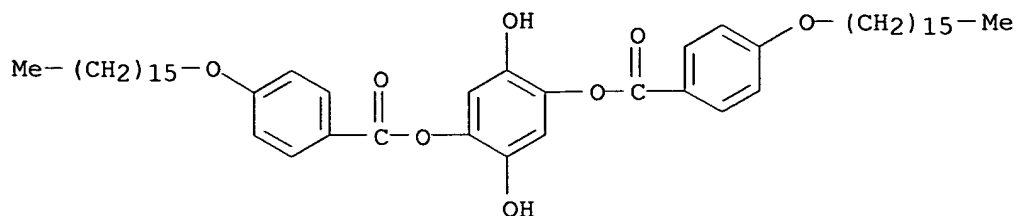
RN 200124-98-7 CAPLUS

CN Decanedioic acid, bis[4-(chlorocarbonyl)phenyl] ester, polymer with 2,5-dihydroxy-1,4-phenylene bis[4-(hexadecyloxy)benzoate] (9CI) (CA INDEX NAME)

CM 1

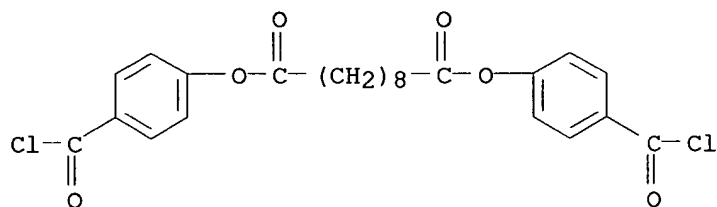
CRN 200124-30-7

CMF C52 H78 O8



CM 2

CRN 76020-56-9
CMF C24 H24 Cl2 O6



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:527999 CAPLUS

DOCUMENT NUMBER: 127:234686

TITLE: Synthesis and property of shish-kebab type liquid-crystalline polymers with chiral carbons

AUTHOR(S): Zhou, Qi Feng; Xie, Ren; Zhu, Yan Tao

CORPORATE SOURCE: College Chemistry, Peking University, Beijing, 100871, Peop. Rep. China

SOURCE: Macromolecular Symposia (1997), 118, 183-188
CODEN: MSYMEC; ISSN: 1022-1360

PUBLISHER: Huethig & Wepf

DOCUMENT TYPE: Journal

LANGUAGE: English

AB New polymers with chiral carbons and with rod-like mesogenic units being stringed at waist (as the kebabs) by the main-chain (as the shish or skewer) were synthesized and studied. All the chiral polymers are optically highly active and have strong tendency of nematic phase formation.

IT 195156-65-1P

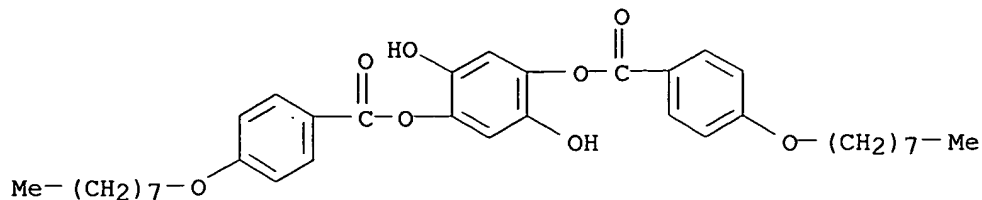
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and properties of shish-kebab type liquid-crystalline polyesters with chiral carbons)

RN 195156-65-1 CAPLUS

CN Hexanedioic acid, polymer with 2,5-dihydroxy-1,4-phenylene bis[4-(octyloxy)benzoate] (9CI) (CA INDEX NAME)

CM 1

CRN 154032-72-1
CMF C36 H46 O8



CM 2

CRN 124-04-9
CMF C6 H10 O4

HO₂C-(CH₂)₄-CO₂H

L7 ANSWER 21 OF 21 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:107370 CAPLUS

DOCUMENT NUMBER: 126:119059

TITLE: Photocrosslinkable liquid-crystalline dyes and their use

INVENTOR(S): Kelly, Stephen

PATENT ASSIGNEE(S): F. Hoffmann-La Roche Ag, Switz.

SOURCE: Eur. Pat. Appl., 20 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 748852	A2	19961218	EP 1996-108308	19960524 <--
EP 748852	A3	19980429		
EP 748852	B1	20011212		
R: CH, DE, FR, GB, IT, LI, NL				
US 5707544	A	19980113	US 1996-650241	19960520 <--
JP 08333320	A2	19961217	JP 1996-139942	19960603 <--
CN 1143665	A	19970226	CN 1996-107987	19960605 <--
CN 1136287	B	20040128		
HK 1011039	A1	20020404	HK 1998-112106	19981118
PRIORITY APPLN. INFO.:			CH 1995-1663	A 19950607

OTHER SOURCE(S): MARPAT 126:119059

AB The dyes are of the form AlC₆H₃A₂A₃-4,3 (A₁, A₂ = crosslinkable, mesogenic groups; A₃ = dichroic group containing e.g., an azo or anthraquinone moiety) and in their crosslinked state have use as optical materials. Thus, 2,5-bis[4-[6-(acryloyloxy)hexyloxy]phenylcarboxy]benzoic acid was esterified with 6-[4-(4-nitrophenylazo)phenoxy]hexanol to give liquid-crystalline 6-[4-(4-nitrophenylazo)phenoxy]hexyl 2,5-bis[4-[6-(acryloyloxy)hexyloxy]phenylcarboxy]benzoate (I). I could be copolymd. with pentyl 2,5-bis[4-[6-(acryloyloxy)hexyloxy]phenylcarboxy]benzoate in the presence of a photoinitiator using polarized light to provide a structured absorption filter.

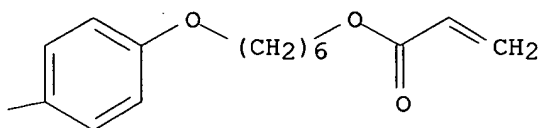
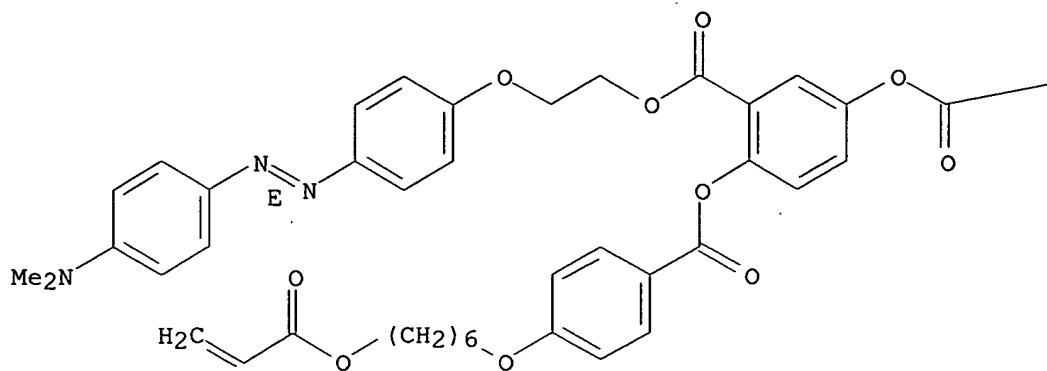
IT 185993-63-9P

RL: IMF (Industrial manufacture); PREP (Preparation)
(photocrosslinkable liquid-crystalline dyes for optical materials)

RN 185993-63-9 CAPLUS

CN Benzoic acid, 2,5-bis[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]-, 2-[4-[[4-(dimethylamino)phenyl]azo]phenoxy]ethyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



=> s l1 full

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 13:40:51 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 44801 TO ITERATE

100.0% PROCESSED 44801 ITERATIONS
SEARCH TIME: 00.00.01

5068 ANSWERS

L8 5068 SEA SSS FUL L1

L9 2160 L8

=> s l9 and py<2001
20649792 PY<2001

L10 1594 L9 AND PY<2001

=> s l10 and polymeri?
533865 POLYMERI?

L11 521 L10 AND POLYMERI?

=> s l11 and amino?
1391600 AMINO?

L12 31 L11 AND AMINO?

=> d 1-31 ibib abs hitstr

L12 ANSWER 1 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:719647 CAPLUS

DOCUMENT NUMBER: 134:178895

TITLE: Synthesis and characterization of new polyesters

AUTHOR(S): containing imidazolidine-2,4,5-trione rings
 Gaina, C.; Gaina, V.; Cozan, V.
 CORPORATE SOURCE: "Petru Poni" Institute of Macromolecular Chemistry,
 Iasi, RO 6600, Rom.
 SOURCE: European Polymer Journal (2000), Volume Date
 2001, 37(1), 79-84
 CODEN: EUPJAG; ISSN: 0014-3057
 PUBLISHER: Elsevier Science Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB New polyesters containing both aliphatic and aromatic units in the backbone were
 prepared by the reaction of 4,4'-[hexane-1,6-diylbis(2,4,5-
 trioxoimidazolidine-1,5-diyl)]dibenzoyl chloride (I) monomer with various
 bisphenols. The model compound di-Et 4,4'-[hexane-1,6-diylbis(2,4,5-
 trioxoimidazolidine-1,5-diyl)]dibenzoate (II) was synthesized by
 esterification of I with ethanol. I, II, and the polymers were confirmed
 structurally by IR and 1H-NMR spectroscopy and characterized by their
 viscosities, solubilities, and thermal properties. Liquid-crystalline behavior
 in the molten state was noticed for polymers containing p-phenylenedioxy and
 1,5-naphthalenedioxy units in the backbone.
 IT **326813-23-4P**
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (liquid-crystalline; preparation and properties of polyesters containing
 imidazolidinetrione rings)
 RN 326813-23-4 CAPLUS
 CN Poly[(2,4,5-trioxo-1,3-imidazolidinediyl)-1,6-hexanediyl(2,4,5-trioxo-1,3-
 imidazolidinediyl)-1,4-phenylenecarbonyloxy-1,4-phenyleneoxycarbonyl-1,4-
 phenylene] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

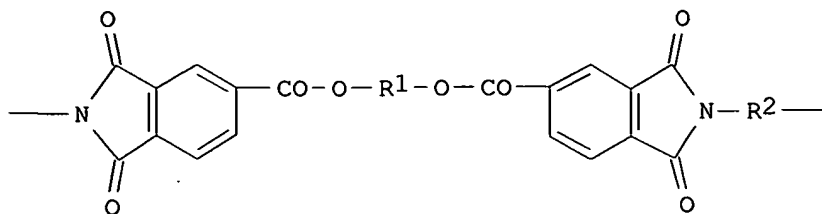
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:531105 CAPLUS
 DOCUMENT NUMBER: 131:170789
 TITLE: Polyimide resin solution and the production method
 INVENTOR(S): Tanaka, Shigeru; Furuya, Hiroyuki
 PATENT ASSIGNEE(S): Kanegafuchi Chemical Industry Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 11228693	A2	19990824	JP 1998-32758	19980216 <--
PRIORITY APPLN. INFO.:			JP 1998-32758	19980216
GI				



I

AB The solution, $\geq 10\%$ soluble in a polar organic solvent and having water absorption $\leq 1\%$ at 200° , comprises a repeating unit of I [R1 = C6H4, (CH2)2, PhCMe2Ph; R2 = C6H4O(CH2CH2O)nC6H4; n = 1-10]. Thus, polymerization of 2,2-bis[(4-aminophenoxy)phenyl]propane and 2,2-bis(4-hydroxyphenyl)propane dibenzoate-3,3',4,4'-tetracarboxylic dianhydride in DMF gave a polyamic acid which was mixed with acetic anhydride, isoquinone and DMF, applied on a PET film and heated from $100-250^\circ$ to give a film.

IT 189299-34-1P 189299-35-2P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyimide resin solution and the production method)

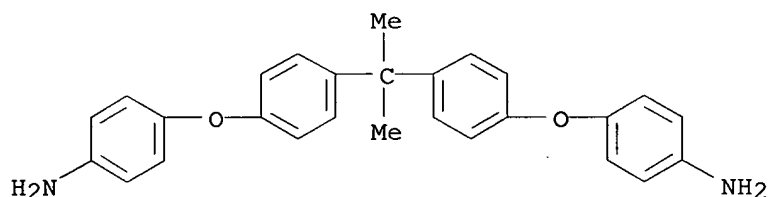
RN 189299-34-1 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 13080-86-9

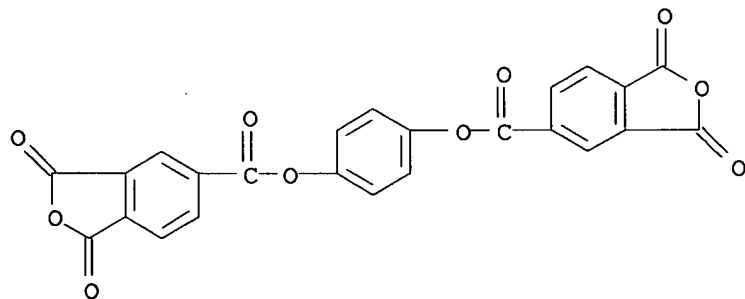
CMF C27 H26 N2 O2



CM 2

CRN 2770-49-2

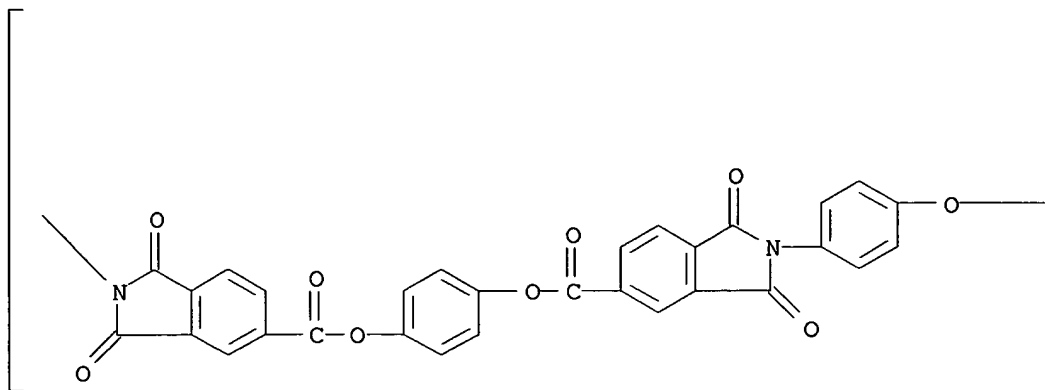
CMF C24 H10 O10



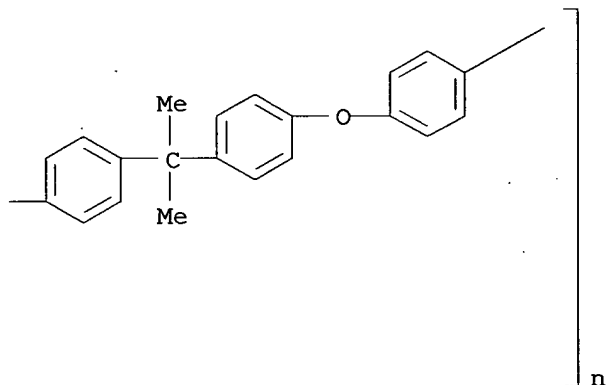
RN 189299-35-2 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyloxy-1,4-phenyleneoxycarbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenyleneoxy-1,4-phenylene(1-methylethylidene)-1,4-phenyleneoxy-1,4-

PAGE 1-A



PAGE 1-B



L12 ANSWER 3 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:171523 CAPLUS

DOCUMENT NUMBER: 130:282706

TITLE: Relationship between the structure of the bridging group and curing of liquid crystalline epoxy resins

AUTHOR(S): Lee, Jun Yeob; Jang, Jyongsik; Hong, Soon Man; Hwang, Seung Sang; Kim, Kwang Ung

CORPORATE SOURCE: Department of Chemical Technology, College of Engineering, Seoul National University, Seoul, S. Korea

SOURCE: Polymer (1999), 40(11), 3197-3202

CODEN: POLMAG; ISSN: 0032-3861

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The effect of the bridging group between the mesogenic group and the oxirane ring on the curing mechanism and the liquid crystalline phase of liquid crystalline epoxy (LCE) resins was studied. Two LCE resins containing ether and ester bridging groups were prepared; the ether linkage stabilized the liquid crystalline phase of the LCE and the LCE network more than the ester linkage. A retardation effect on curing was observed in LCE with the ester linkage. The LCE with the ether bridge showed more stable mech. and thermal properties than those of LCE with the ester bridge. The liquid crystalline phase of the LCE monomer remained after the crosslinking reaction and it was stable up to 300°.

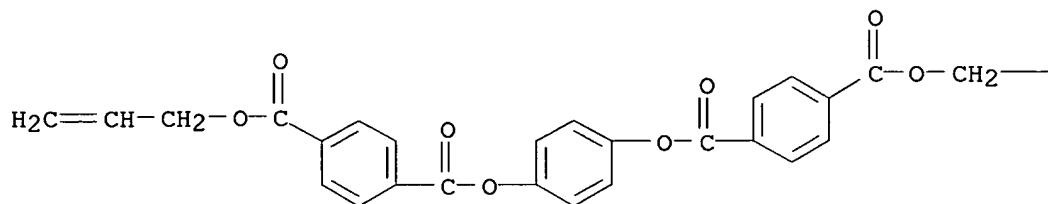
IT 222854-71-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (intermediate; preparation and structure of liquid crystal epoxy resins and effect of bridging group on crosslink d. and phase structure)

RN 222854-71-9 CAPLUS

CN 1,4-Benzenedicarboxylic acid, 1,4-phenylene di-2-propenyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

—CH=CH2

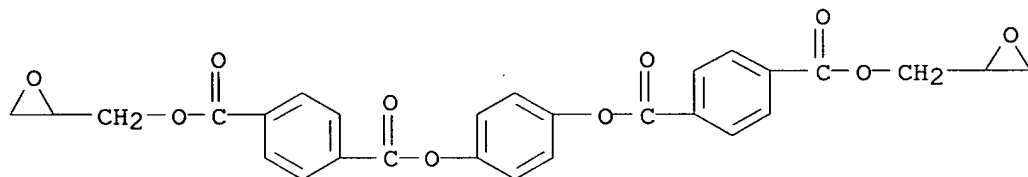
IT 222854-72-0P

RL: PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)

(monomer; preparation and structure of liquid crystal epoxy resins and effect of bridging group on crosslink d. and phase structure)

RN 222854-72-0 CAPLUS

CN 1,4-Benzenedicarboxylic acid, 1,4-phenylene bis(oxiranylmethyl) ester (9CI) (CA INDEX NAME)



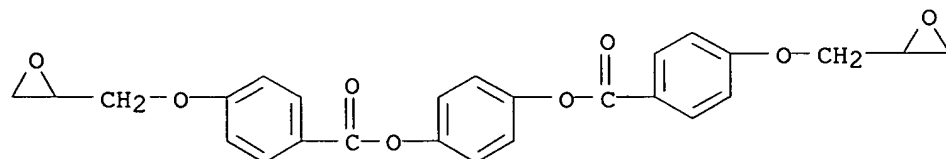
IT 168196-20-1, p-Phenylene-di[4-(2,3-epoxypropyloxy)benzoate]

RL: RCT (Reactant); RACT (Reactant or reagent)

(monomer; preparation and structure of liquid crystal epoxy resins and effect of bridging group on crosslink d. and phase structure)

RN 168196-20-1 CAPLUS

CN Benzoic acid, 4-(oxiranylmethoxy)-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



IT 206655-54-1P 222854-73-1P

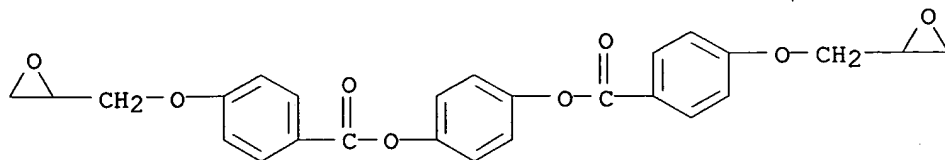
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(preparation and structure of liquid crystal epoxy resins and effect of

bridging group on crosslink d. and phase structure)
 RN 206655-54-1 CAPLUS
 CN Benzoic acid, 4-(oxiranylmethoxy)-, 1,4-phenylene ester, polymer with
 4-aminophenyl 4-aminobenzoate (9CI) (CA INDEX NAME)

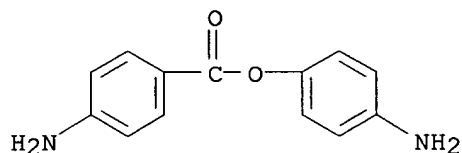
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CRN 168196-20-1
 CMF C26 H22 O8



CM 2

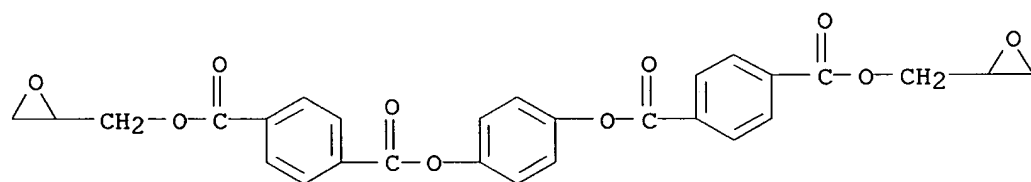
CRN 20610-77-9
 CMF C13 H12 N2 O2



RN 222854-73-1 CAPLUS
 CN 1,4-Benzenedicarboxylic acid, 1,4-phenylene bis(oxiranylmethyl) ester,
 polymer with 4-aminophenyl 4-aminobenzoate (9CI) (CA INDEX NAME)

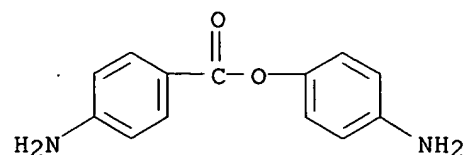
CM 1

CRN 222854-72-0
 CMF C28 H22 O10



CM 2

CRN 20610-77-9
 CMF C13 H12 N2 O2



L12 ANSWER 4 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:32013 CAPLUS

DOCUMENT NUMBER: 130:96857

TITLE: Liquid-crystalline, crosslinkable siloxanes, their crosslinked products having a low glass transition temperature, and their manufacture

INVENTOR(S): Haberle, Norman; Kreuzer, Franz-Heinrich; Kupfer, Jurgen

PATENT ASSIGNEE(S): Consortium fur Elektrochemische Industrie G.m.b.H., Germany

SOURCE: Eur. Pat. Appl., 14 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 887399	A1	19981230	EP 1998-110153	19980604 <--
EP 887399	B1	20011128		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19726047	A1	19981224	DE 1997-19726047	19970619 <--
SG 82579	A1	20010821	SG 1998-1337	19980518
AT 209672	E	20011215	AT 1998-110153	19980604
US 6040411	A	20000321	US 1998-90025	19980610 <--
CA 2240817	AA	19981219	CA 1998-2240817	19980616 <--
JP 11100445	A2	19990413	JP 1998-169966	19980617 <--

PRIORITY APPLN. INFO.: DE 1997-19726047 A 19970619

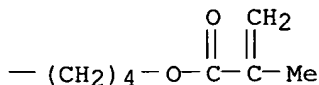
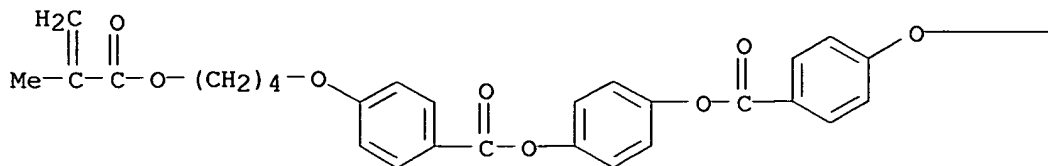
AB Title siloxanes, useful as pigments, are manufactured by reaction of hydrosiloxanes with CH₂:CH(CH₂)p-2OqC₆H₄Z(CO₂)s(AM)tE(CH₂CH₂O)aVN [I; Z = CH₂ or CH₂CH₂; A = aromatic or heterocyclic divalent group; M = O, CO₂, OCO, or OCO(CH₂)vCO₂CH₂CH₂; VN = CO₂CH:CH₂, CO₂CMe:CH₂, (CH₂)uOCH:CH₂, CH:CH₂, or oxiranyl; E = (O-bridged) C1-10 alkylene; a = 0-6; p = 3-6; q, s = 0 or 1; t = 0-3; with no O atoms directly bonded 1 to another] or a mixture of I and CH₂:CH(CH₂)m-2OnAtQX [A = same as in I; Q = CO₂, OCO, O, single bond, or OC(O)O; X = cholesteryl, dihydrocholesteryl, doristeryl, isosorbidyl, isomannidyl, cholic acid group, (4-substituted) Ph, (4'-substituted) biphenyl, (4-substituted) cyclohexyl, (4'-substituted) dicyclohexyl, (4'-substituted) cyclohexylphenyl, (2,5-substituted) 1,3-dioxanyl, or (substituted) pyrimidinyl; m = 3-6; n = 0 or 1; t = 0-3]. Thus, reacting 71 g cholesteryl 4-allyloxybenzoate with 21 g 1,3,5,7-tetrahydrocyclotetrasiloxane 1 h at 60° in the presence of a cyclooctadienyldichloroplatinum (II) catalyst, cooling to 40°, adding 4-(4-methacryloyloxybutoxy)phenyl 4-allyloxybenzoate (III) 80, BHT 0.09, and 0.5% II-CH₂Cl₂ solution 1.06 g, heating 1.5 h at 75°, cooling to 20°, adding III 37.2, cholesteryl methacrylate 9.85, and BHT 0.09 g, filtering, adding 5.36 g photoinitiator, removing the solvent on a thin-film evaporator at 90° and 25 hPa, and UV-irradiating and orienting at 90° gave a film with glass temperature 72°.

IT 215057-62-8P

RL: IMF (Industrial manufacture); PREP (Preparation)
(pigment precursor; liquid-crystalline, crosslinkable siloxanes for crosslinked products with low glass temperature for pigments)

RN 215057-62-8 CAPLUS

CN Benzoic acid, 4-[4-[(2-methyl-1-oxo-2-propenyl)oxy]butoxy]-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



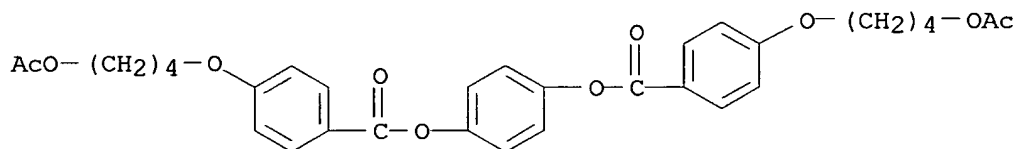
IT 219502-27-9P 219502-28-0P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(pigment precursor; liquid-crystalline, crosslinkable siloxanes for crosslinked products with low glass temperature for pigments)

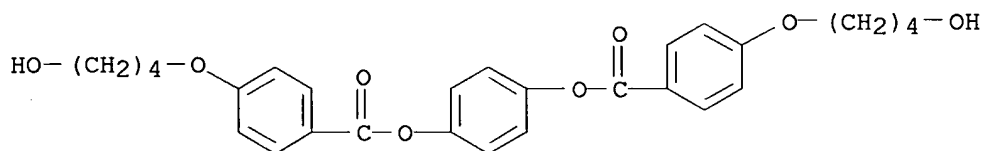
RN 219502-27-9 CAPLUS

CN Benzoic acid, 4-[4-(acetyloxy)butoxy]-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



RN 219502-28-0 CAPLUS

CN Benzoic acid, 4-(4-hydroxybutoxy)-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



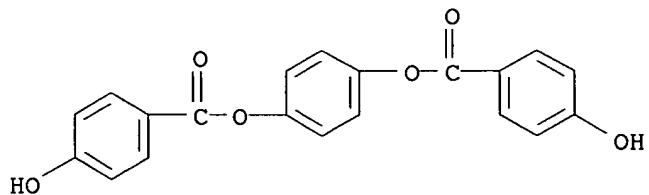
IT 53201-62-0, Hydroquinone bis(4-hydroxybenzoate) 85234-29-3, Hydroquinone bis(4-allyloxybenzoate)

RL: RCT (Reactant); RACT (Reactant or reagent)

(pigment precursor; liquid-crystalline, crosslinkable siloxanes for crosslinked products with low glass temperature for pigments)

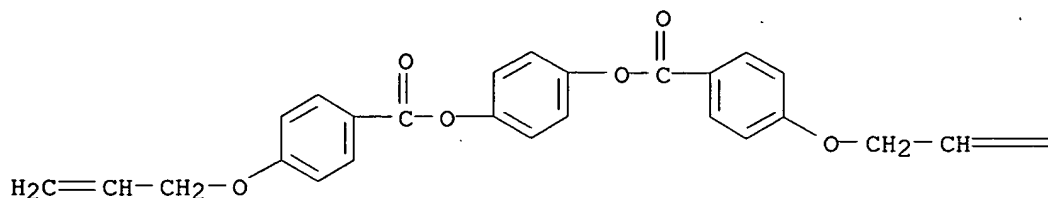
RN 53201-62-0 CAPLUS

CN Benzoic acid, 4-hydroxy-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



RN 85234-29-3 CAPLUS

PAGE 1-A



PAGE 1-B

=CH₂

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 5 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:728659 CAPLUS

DOCUMENT NUMBER: 130:18968

TITLE: Aligning agent for liquid crystal

INVENTOR(S): Endou, Hideyuki; Nihira, Takayasu; Fukuro, Hiroyoshi

PATENT ASSIGNEE(S): Nissan Chemical Industries, Ltd., Japan

SOURCE: PCT Int. Appl., 41 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9849596	A1	19981105	WO 1998-JP1955	19980428 <--
W: CN, KR, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
TW 461980	B	20011101	TW 1998-87106448	19980427
EP 980016	A1	20000216	EP 1998-917723	19980428 <--
R: DE, FR, GB, IT, NL				
CN 1114125	B	20030709	CN 1998-804506	19980428
JP 11015001	A2	19990122	JP 1998-120941	19980430 <--
US 6274695	B1	20010814	US 1999-403766	19991101
PRIORITY APPLN. INFO.:			JP 1997-113002	A 19970430
			WO 1998-JP1955	W 19980428

AB An aligning agent for liquid crystals which is for use in a method in which a thin polymer film formed on a substrate is irradiated with polarized UV or electron beams from a given direction based on the plane of the substrate and this substrate is used to align a liquid crystal without rubbing the substrate, characterized by comprising a polymer containing photochem. reactive groups in the polymer backbone and having a oxide glass transition point of 200 °C or higher.

IT 215736-28-0P 215736-29-1P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(prepared as liquid crystal aligning agent)

RN 215736-28-0 CAPLUS

CN Cyclobuta[1,2-c:3,4-c']difurantetrone, tetrahydro-, polymer with

LANGUAGE: English

AB The synthesis of a new series of aromatic bis(ether acid)s and bis(ether acid chloride)s by fluoro displacement with catechol or its derivs. has been developed and exemplified. These monomers allow the synthesis of new aramids (poly(ether amide)s), polyarylates (poly(ether ester)s) and copolyarylates in which ortho-phenylene units are enchaind through ether linkages. These polymers are significantly more flexible and, therefore, more soluble than conventional aromatic polyamides and polyesters. They have useful levels of thermal stability, associated with relatively high glass-transition temps. ($>200^{\circ}\text{C}$), are processable from solution or the melt, and are potentially crystallizable. Liquid crystalline poly(ether ester)s were prepared. Polyamides prepared from bis(ether acid)s in which all three aromatic rings, separated by ether linkages, are all ortho-substituted gave low-mol. weight polymers.

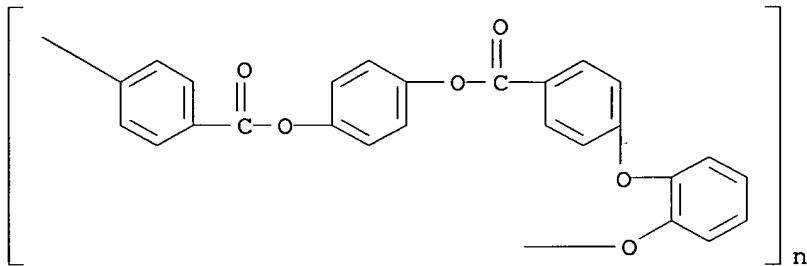
IT 187089-00-5P 187089-05-0P 187089-08-3P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(preparation of 1,2-bis(carboxyphenoxy)arylenes and preparation and properties of polyamide-polyethers and polyester-polyethers from them)

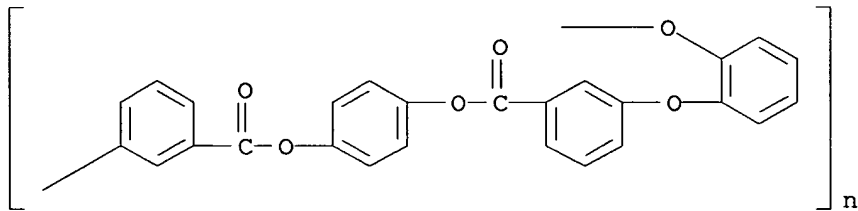
RN 187089-00-5 CAPLUS

CN Poly(oxy-1,2-phenyleneoxy-1,4-phenylenecarbonyloxy-1,4-phenyleneoxy-1,4-phenylene) (9CI) (CA INDEX NAME)



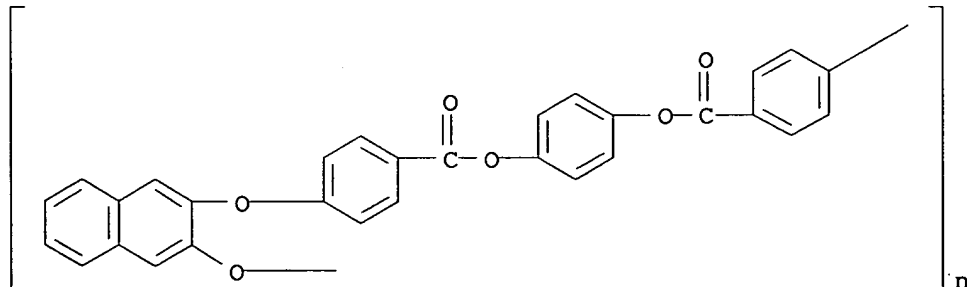
RN 187089-05-0 CAPLUS

CN Poly(oxy-1,2-phenyleneoxy-1,3-phenylenecarbonyloxy-1,4-phenyleneoxycarbonyl-1,3-phenylene) (9CI) (CA INDEX NAME)



RN 187089-08-3 CAPLUS

CN Poly(oxy-2,3-naphthalenediyl-oxy-1,4-phenylene-carbonyloxy-1,4-phenylene-oxycarbonyl-1,4-phenylene) (9CI) (CA INDEX NAME)



L12 ANSWER 7 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:552272 CAPLUS

DOCUMENT NUMBER: 129:231897

TITLE: Effect of the rigid units content on tensile
properties of the thermotropic liquid crystalline
polyester amides

AUTHOR(S): Kim, Youn Cheol

CORPORATE SOURCE: Advanced Materials Division, Korea Research Institute
of Chemical Technology, Taejon, 305-600, S. KoreaSOURCE: Polymer Journal (Tokyo) (1998), 30(8),
610-615

CODEN: POLJB8; ISSN: 0032-3896

PUBLISHER: Society of Polymer Science, Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The effects of the rigid units content on tensile properties of
thermotropic liquid crystalline (TLC) polyesteramides with bulky side group were
investigated by wide-angle X-ray diffraction, SEM, and tensile
measurements. The LC phase and relaxation times of TLC polyesteramides
were largely dependent on the amount of rigid units. The as-spun fiber of
the copolyesteramide (X=0.7) having large amount of rigid units exhibited
higher tensile properties than that of the homopolyesteramide (X=1.0).
The high tensile strength of copolyesteramide could be explained by the
longer relaxation time and better LC property due to the increase of the
amount of rigid unit in the mol. chain. The tensile strengths decreased by
annealing spun fiber at 220°, the decrease of tensile strength
became dominant in high draw ratio region. It may be attributed to the
relaxation of mol. orientation by long time annealing at 220°.

IT 152678-32-5, 1,4-Bis(4-aminobenzoyloxy

)-2-phenylbenzene-sebacoyl chloride-terephthaloyl chloride copolymer

RL: PEP (Physical, engineering or chemical process); PRP (Properties);

PROC (Process)

(rigid units content in relation to tensile properties of thermotropic
liquid crystalline polyester-amides and their fibers)

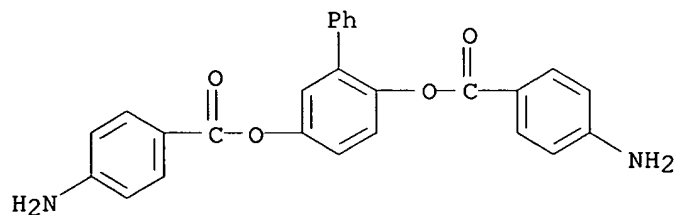
RN 152678-32-5 CAPLUS

CN 1,4-Benzenedicarbonyl dichloride, polymer with [1,1'-biphenyl]-2,5-diyl
bis(4-aminobenzoate) and decanedioyl dichloride (9CI) (CA INDEX NAME)

CM 1

CRN 152678-30-3

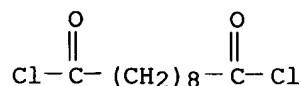
CMF C26 H20 N2 O4



CM 2

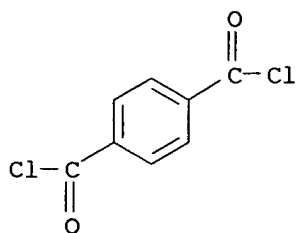
CRN 111-19-3

CMF C10 H16 Cl2 O2



CM 3

CRN 100-20-9
CMF C8 H4 Cl2 O2



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 8 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:430901 CAPLUS

DOCUMENT NUMBER: 129:82046

TITLE: Liquid crystalline thermosets from triaromatic ester group containing diepoxides and aromatic diamines

AUTHOR(S): Mormann, Werner; Broecher, Markus

CORPORATE SOURCE: Fachbereich 8, Lab. Makromolekulare Chemie, Univ.-GH Siegen, Siegen, D-57068, Germany

SOURCE: Macromolecular Chemistry and Physics (1998), 199(5), 853-859

CODEN: MCHPES; ISSN: 1022-1352

PUBLISHER: Huethig & Wepf Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Three novel triarom. diepoxides, 1,4-phenylene bis(4-(2,3-epoxypropoxy)benzoate) (I), methyl-1,4-phenylene bis(4-(2,3-epoxypropoxy)benzoate) (II), and chloro-1,4-phenylene bis(4-(2,3-epoxypropoxy)benzoate), were synthesized and their mesogenic properties studied. I and II were reacted with 4,4'-diaminobiphenyl, 4-aminophenyl 4-aminobenzoate, and 4,4'-diaminodiphenylmethane to investigate the formation of anisotropic networks. The influence of the curing conditions and of the structure of monomers and amines on the formation of liquid-crystalline thermoset (LCT) networks was studied. All combinations give nematic networks. The temperature range in which nematic melts and LCT are formed is determined by complete melting of the mixture and by its clearing point, which is in good agreement with the value calculated from the clearing points of the monomers. Orientation of initially liquid-crystalline mixts. is better than the orientation of mixts. which form the mesophase starting from an isotropic melt.

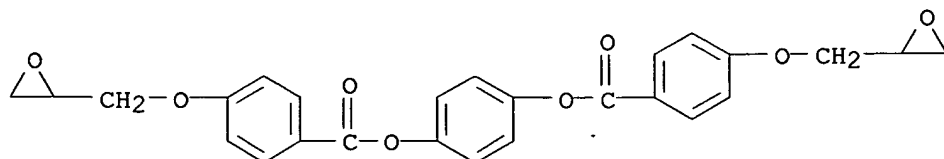
IT 168196-20-1P 168196-27-8P 206655-53-0P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

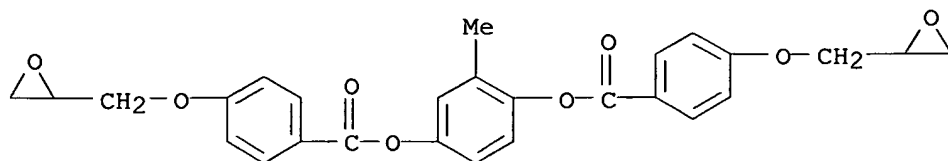
(monomer; preparation and polymerization of nematic epoxy-terminated ester monomers)

RN 168196-20-1 CAPLUS

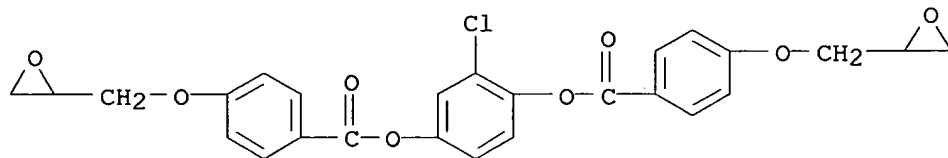
CN Benzoic acid, 4-(oxiranylmethoxy)-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



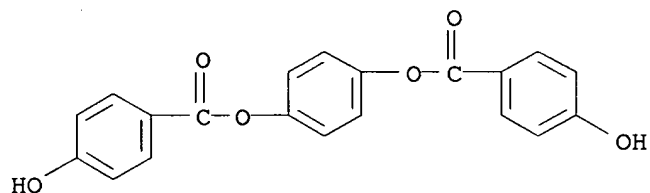
RN 168196-27-8 CAPLUS
 CN Benzoic acid, 4-(oxiranylmethoxy)-, 2-methyl-1,4-phenylene ester (9CI)
 (CA INDEX NAME)



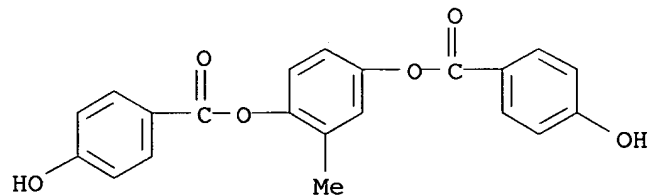
RN 206655-53-0 CAPLUS
 CN Benzoic acid, 4-(oxiranylmethoxy)-, 2-chloro-1,4-phenylene ester (9CI)
 (CA INDEX NAME)



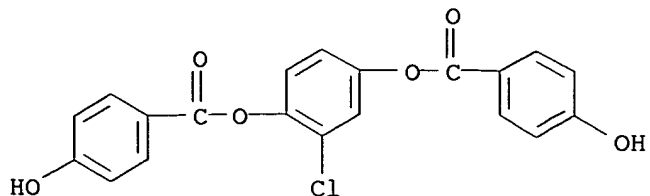
IT **53201-62-0P 119959-84-1P 130865-21-3P**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and polymerization of nematic epoxy-terminated ester monomers)
 RN 53201-62-0 CAPLUS
 CN Benzoic acid, 4-hydroxy-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



RN 119959-84-1 CAPLUS
 CN Benzoic acid, 4-hydroxy-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



RN 130865-21-3 CAPLUS
 CN Benzoic acid, 4-hydroxy-, 2-chloro-1,4-phenylene ester (9CI) (CA INDEX NAME)



IT 206655-54-1P 206655-56-3P 209164-13-6P

209164-14-7P 209164-15-8P 209164-16-9P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and properties of nematic thermosets from epoxy-terminated ester and amines)

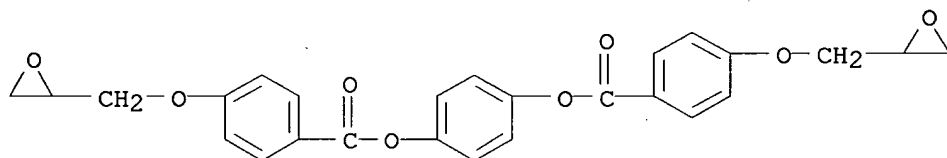
RN 206655-54-1 CAPLUS

CN Benzoic acid, 4-(oxiranylmethoxy)-, 1,4-phenylene ester, polymer with 4-aminophenyl 4-aminobenzoate (9CI) (CA INDEX NAME)

CM 1

CRN 168196-20-1

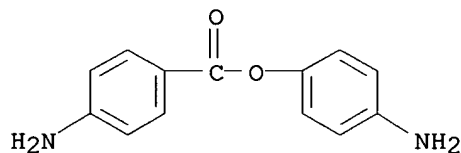
CMF C26 H22 O8



CM 2

CRN 20610-77-9

CMF C13 H12 N2 O2



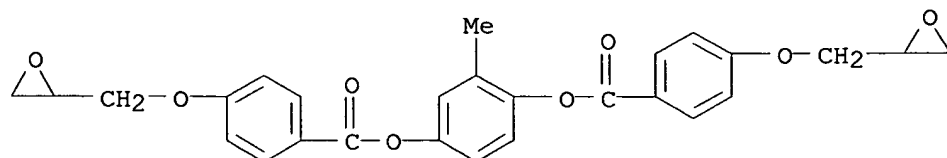
RN 206655-56-3 CAPLUS

CN Benzoic acid, 4-(oxiranylmethoxy)-, 2-methyl-1,4-phenylene ester, polymer with 4-aminophenyl 4-aminobenzoate (9CI) (CA INDEX NAME)

CM 1

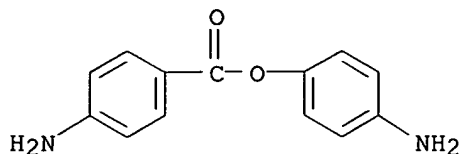
CRN 168196-27-8

CMF C27 H24 O8



CM 2

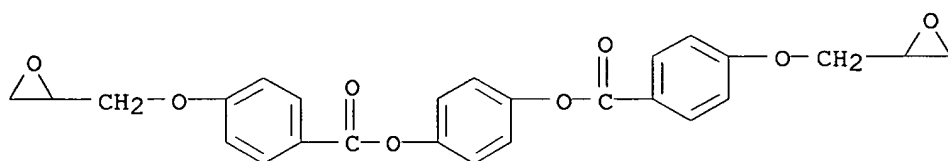
CRN 20610-77-9
CMF C13 H12 N2 O2



RN 209164-13-6 CAPLUS
CN Benzoic acid, 4-(oxiranylmethoxy)-, 1,4-phenylene ester, polymer with [1,1'-biphenyl]-4,4'-diamine (9CI) (CA INDEX NAME)

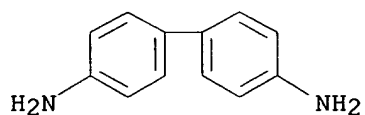
CM 1

CRN 168196-20-1
CMF C26 H22 O8



CM 2

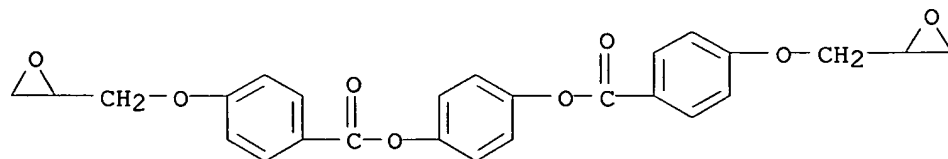
CRN 92-87-5
CMF C12 H12 N2



RN 209164-14-7 CAPLUS
CN Benzoic acid, 4-(oxiranylmethoxy)-, 1,4-phenylene ester, polymer with 4,4'-methylenebis[benzenamine] (9CI) (CA INDEX NAME)

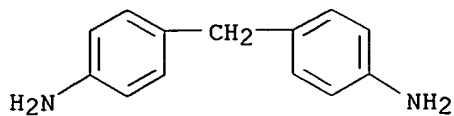
CM 1

CRN 168196-20-1
CMF C26 H22 O8



CM 2

CRN 101-77-9
CMF C13 H14 N2



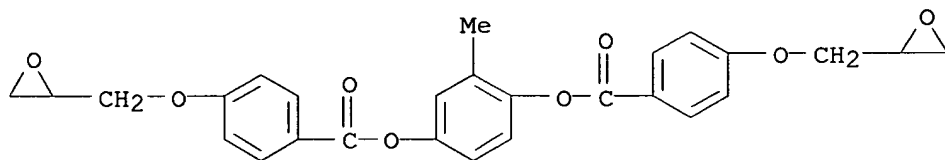
RN 209164-15-8 CAPLUS

CN Benzoic acid, 4-(oxiranylmethoxy)-, 2-methyl-1,4-phenylene ester, polymer with [1,1'-biphenyl]-4,4'-diamine (9CI) (CA INDEX NAME)

CM 1

CRN 168196-27-8

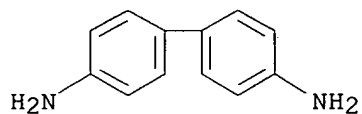
CMF C27 H24 O8



CM 2

CRN 92-87-5

CMF C12 H12 N2



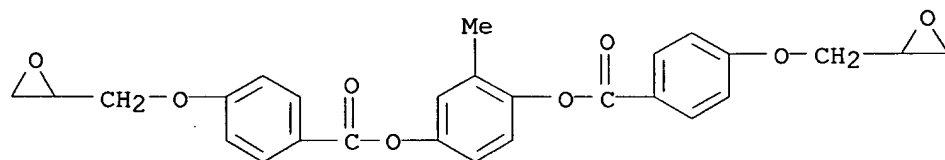
RN 209164-16-9 CAPLUS

CN Benzoic acid, 4-(oxiranylmethoxy)-, 2-methyl-1,4-phenylene ester, polymer with 4,4'-methylenebis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 168196-27-8

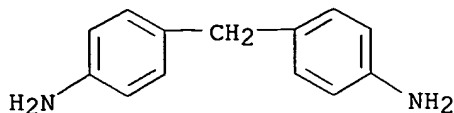
CMF C27 H24 O8



CM 2

CRN 101-77-9

CMF C13 H14 N2



L12 ANSWER 9 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:688751 CAPLUS

DOCUMENT NUMBER: 128:17476

TITLE: Formation of organized structures through variation in molecular architecture and chemical composition

AUTHOR(S): Pugh, Coleen; Arehart, Stephen V.; Bae, Jin-Young; Brandys, Frank A.

CORPORATE SOURCE: Dep. Chem., Macromol. Sci. Eng. Cent., Univ. Michigan, Ann Arbor, MI, 48109-1055, USA

SOURCE: Journal of Macromolecular Science, Pure and Applied Chemistry (1997), A34(10), 2057-2071
CODEN: JSPCE6; ISSN: 1060-1325

PUBLISHER: Dekker

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Amphiphilic mols. were synthesized to force nematic liquid crystals to order into smectic mesophases, and to direct poly(ethylene oxide) to thread macrocrown ethers. The 1st concept is fairly well developed, with both hydrocarbon/fluorocarbon and hydrocarbon/oligo(dimethylsilane) analogs of 2,5-bis[(4'-alkoxybenzoyl)oxy]toluenes forming only smectic mesophases. In addition to the low molar mass model compds., the corresponding side-chain liquid crystalline polynorbornenes with hydrocarbon/fluorocarbon substituents organize into smectic layers. Preliminary HPLC results also indicate that the 2nd concept is viable; that poly(ethylene oxide) threads amphiphilic macrocrown ethers that are organized into lyotropic phases in solns. of toluene/H₂O or benzene/H₂O.

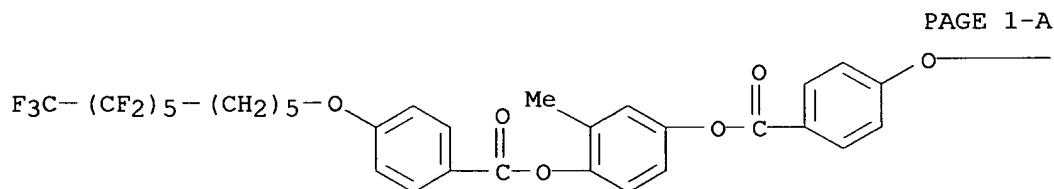
IT 169786-37-2

RL: PRP (Properties)

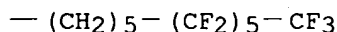
(layer spacing of smectic phases of)

RN 169786-37-2 CAPLUS

CN Benzoic acid, 4-[(6,6,7,7,8,8,9,9,10,10,11,11,11-tridecafluoroundecyl)oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



PAGE 1-B



IT 198980-88-0 198980-90-4 198980-91-5

198980-92-6 198980-93-7 198980-95-9

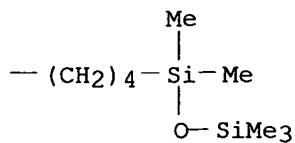
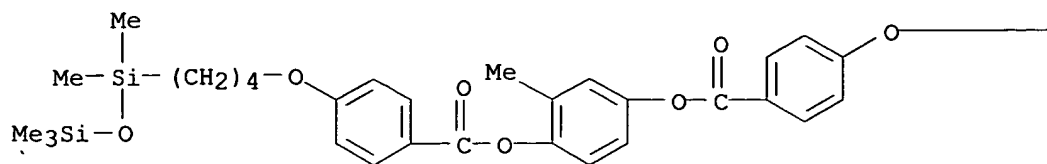
198980-96-0 198980-99-3

RL: PRP (Properties)

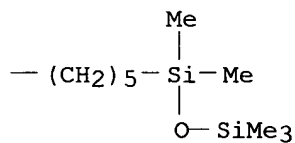
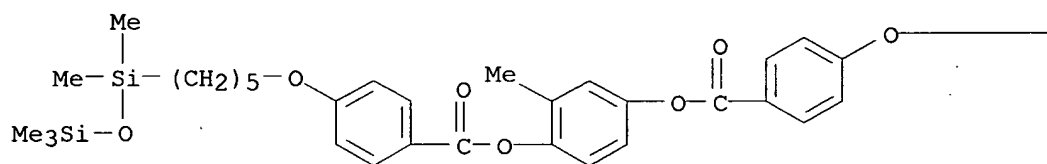
(smectic C liquid crystal phase)

RN 198980-88-0 CAPLUS

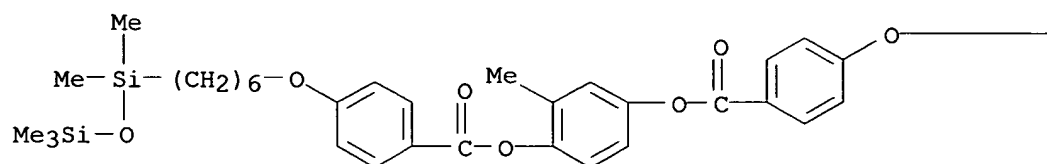
CN Benzoic acid, 4-[4-(pentamethyldisiloxanyl)butoxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

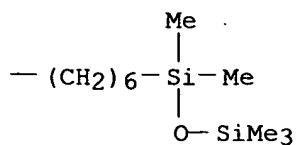


RN 198980-90-4 CAPLUS
 CN Benzoic acid, 4-[[5-(pentamethyldisiloxanyl)pentyl]oxy]-,
 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



RN 198980-91-5 CAPLUS
 CN Benzoic acid, 4-[[6-(pentamethyldisiloxanyl)hexyl]oxy]-,
 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

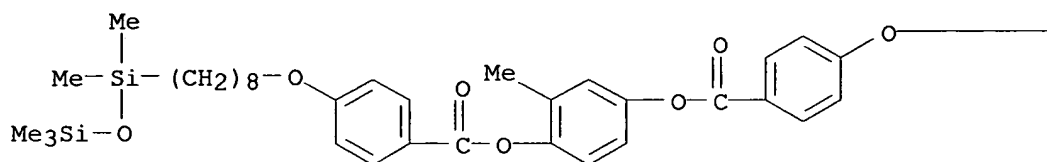




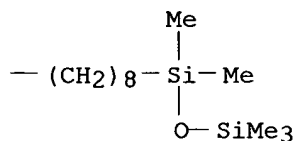
RN 198980-92-6 CAPLUS

CN Benzoic acid, 4-[[8-(pentamethyldisiloxanyl)octyl]oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

PAGE 1-A



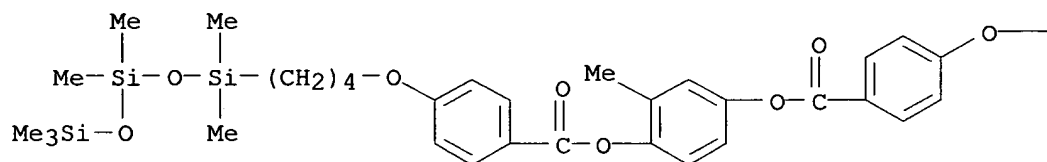
PAGE 1-B



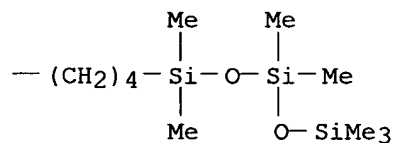
RN 198980-93-7 CAPLUS

CN Benzoic acid, 4-[4-(heptamethyltrisiloxanyl)butoxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

PAGE 1-A

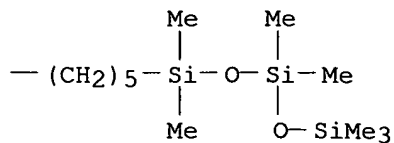
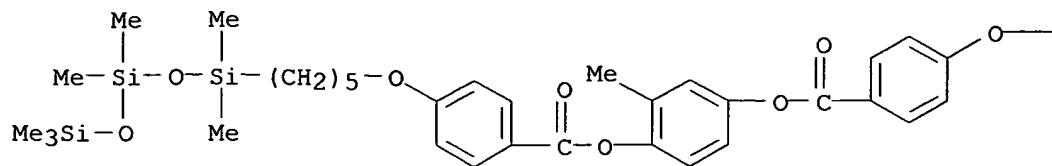


PAGE 1-B



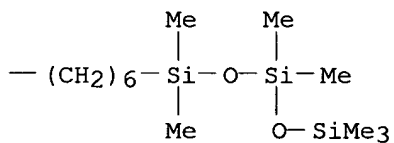
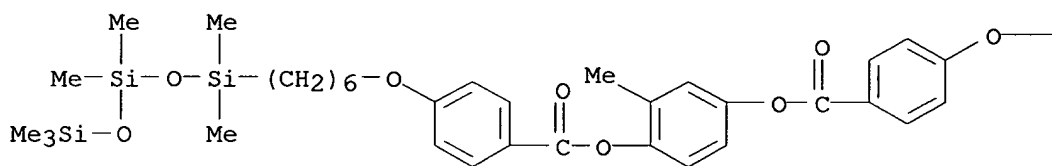
RN 198980-95-9 CAPLUS

CN Benzoic acid, 4-[[5-(heptamethyltrisiloxanyl)pentyl]oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



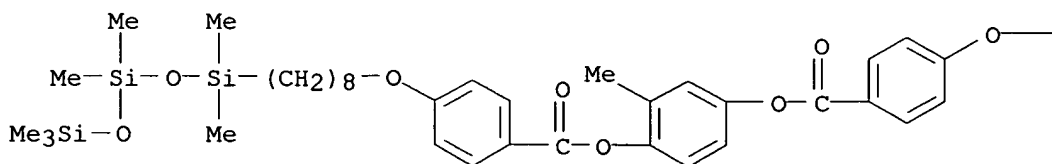
RN 198980-96-0 CAPLUS

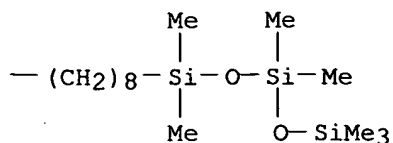
CN Benzoic acid, 4-[[6-(heptamethyltrisiloxanyl)hexyl]oxy]-,
2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



RN 198980-99-3 CAPLUS

CN Benzoic acid, 4-[[8-(heptamethyltrisiloxanyl)octyl]oxy]-,
2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)





REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 10 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:339647 CAPLUS

DOCUMENT NUMBER: 125:11630

TITLE: Preparation of aromatic polyurethane and polyester by high temperature vapor deposition **polymerization**. Study on film formation step in vapor deposition **polymerization**

AUTHOR(S): Iijima, Masayuki; Ukishima, Sadayuki; Takahashi, Yoshikazu

CORPORATE SOURCE: Tsukuba Inst. Super Materials, ULVAC Japan Ltd., Tohokodai, 300-26, Japan

SOURCE: Kobunshi Ronbunshu (1996), 53(5), 317-321

CODEN: KBRBA3; ISSN: 0386-2186

PUBLISHER: Kobunshi Gakkai

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

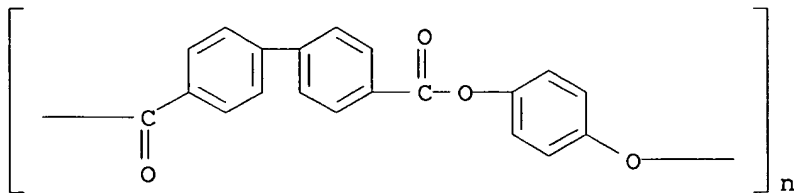
AB We discussed the film formation step in vapor deposition polymerization thermodyn. Enthalpy of vaporization of monomers ($\Delta H = 10\text{--}30$ kcal/mol) were measured from the plots of saturated vapor pressure as a function of reciprocal temperature. They were then compared with the activation energy (1-245 kcal/mol) between the monomers in solution. When the total enthalpy of vaporization of both the monomers is much larger than the activation energy, the polymers can be synthesized by the vapor deposition polymerization. Using this knowledge, aromatic polyurethane and polyester were prepared for the first time by high-temperature vapor deposition polymerization.

IT 118364-12-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
(film formation in preparation of aromatic polyurethane and polyester by high-temperature vapor deposition polymerization)

RN 118364-12-8 CAPLUS

CN Poly(oxy-1,4-phenyleneoxycarbonyl[1,1'-biphenyl]-4,4'-diylcarbonyl) (9CI)
(CA INDEX NAME)



L12 ANSWER 11 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:192841 CAPLUS

DOCUMENT NUMBER: 124:290393

TITLE: The synthesis of nitroaniline monomers and polymers as non-linear optical ferroelectric liquid crystals

AUTHOR(S): Chen, X. H.; Herr, R. P.; Schmitt, K.; Buchecker, R.

CORPORATE SOURCE: Dep. RLCR, F. Hoffmann-La Roche Ltd., Basel, 4002, Switz.

SOURCE: Liquid Crystals (1996), 20(2), 125-38

CODEN: LICRE6; ISSN: 0267-8292

PUBLISHER: Taylor & Francis

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Chiral 2-**amino**-4-alkoxy-5-nitrobenzoate and 5-**amino**-4-alkoxy-2-nitrobenzoate derivs. as well as the corresponding biphenyl derivs. were synthesized. Some of them were also derivatized to the corresponding acrylates and polyacrylates. Many of the new substances exhibit a large spontaneous polarization and large second-order NLO coeffs. In addition some of them show a broad range SC* phase. All these properties depend strongly on small changes in the mol. structures. Here we present the synthesis of these novel NLO FLC materials and discuss some of their properties.

IT **147970-22-7**

RL: PRP (Properties)

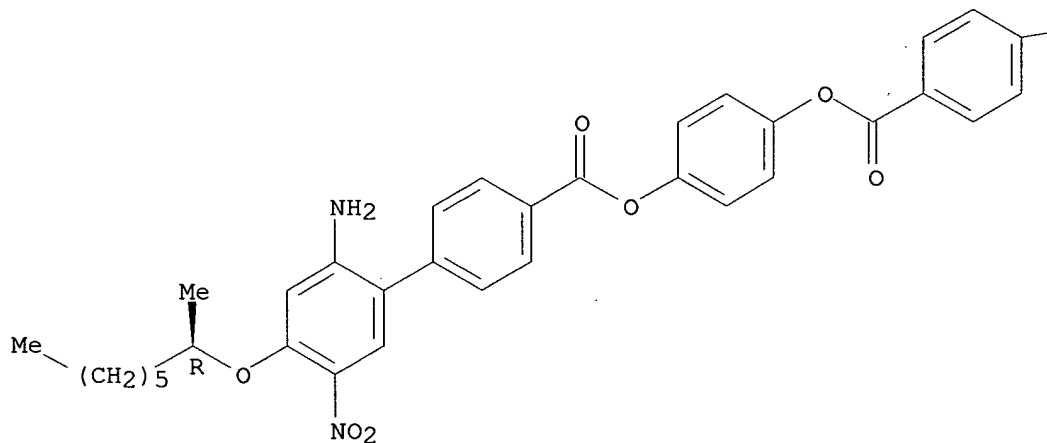
(nitroaniline monomers and polymers as nonlinear optical ferroelec. liquid crystals)

RN 147970-22-7 CAPLUS

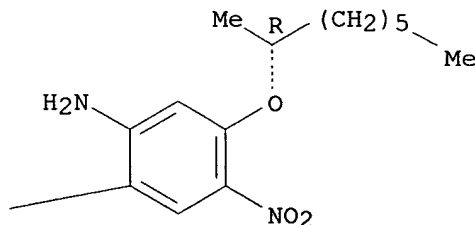
CN [1,1'-Biphenyl]-4-carboxylic acid, 2'-amino-4'-[(1-methylheptyl)oxy]-5'-nitro-, 1,4-phenylene ester, [R-(R*,R*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



L12 ANSWER 12 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:192393 CAPLUS

DOCUMENT NUMBER: 124:290784

TITLE: Preparation and evaluation of polyimide layers as materials for nematic liquid crystal orientation

AUTHOR(S): Okulska-Bozek, Malgorzata; Prot, Tomasz; Borycki, Jerzy; Kedzierski, Jerzy

CORPORATE SOURCE: Tech. Univ. Radom, Inst. Tanning, Plastics and Rubber,
Radom, 26-600, Pol.
SOURCE: Liquid Crystals (1996), 20(3), 349-59
CODEN: LICRE6; ISSN: 0267-8292
PUBLISHER: Taylor & Francis
DOCUMENT TYPE: Journal
LANGUAGE: English

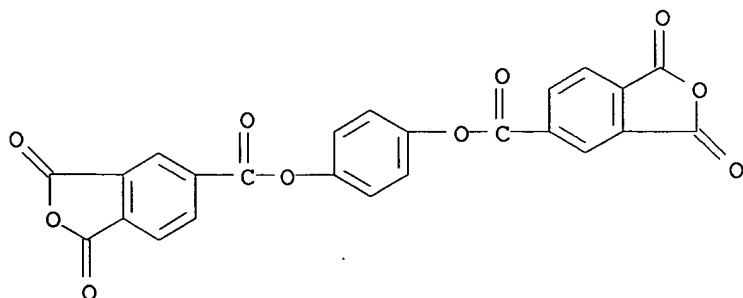
AB Correlations were established between the structure of polyimides and crystal structure and optical properties relevant to LCD [liquid crystal display] technol. Ten poly(pyromellitimide)s, seventeen poly(imide esters) and six poly(imide amides) were synthesized by appropriate polycondensation routes. The stability of 0.5% solns. of the poly(amic acids) in DMF, and the hardness, adhesion to glass, and quality of nematic liquid crystal alignment of the polyimide layers were measured, using the interference wedge method. The polyimides showed alignment of liquid crystal, with alignment depth of 0.04-0.8 mm. Polyimides containing short groups, e.g., -CH₂-, -O-, -S-, or -SO₂ between stiff aromatic segments, possess the best alignment parameters, with alignment depth of 0.3-0.4 mm.

IT **31134-18-6P**, 4,4'-Diaminobiphenyl-p-phenylene bis(trimellitate) dianhydride copolymer **31134-20-0P**, p-Phenylene bis(trimellitate) dianhydride-1,4-phenylenediamine copolymer **31134-21-1P**, 3,3'-Dimethoxy-4,4'-diaminobiphenyl-p-phenylene bis(trimellitate) dianhydride copolymer **31134-23-3P 36250-52-9P**, p-Phenylene bis(trimellitate) dianhydride-1,4-phenylenediamine copolymer, sru **36542-82-2P**, p-Phenylene bis(trimellitate) dianhydride-1,3-phenylenediamine copolymer, sru **36542-84-4P**, 4,4'-Diaminobiphenyl-p-phenylene bis(trimellitate) dianhydride copolymer, sru **61041-05-2P**, 4,4'-(1,3-Phenylenedioxy)diphenylamine-p-phenylene bis(trimellitate) dianhydride copolymer, SRU **61041-12-1P**, 4,4'-(1,3-Phenylenedioxy)diphenylamine-p-phenylene bis(trimellitate) dianhydride copolymer **175699-88-4P**, 1,2-Bis(4-aminophenyl)ethane-p-phenylene bis(trimellitate) dianhydride copolymer, sru **175699-89-5P**, 3,3'-Dimethoxy-4,4'-diaminobiphenyl-p-phenylene bis(trimellitate) dianhydride copolymer, sru **175699-90-8P**, 1,2-Bis(4-aminophenyl)ethane-p-phenylene bis(trimellitate) dianhydride copolymer
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and mol. structure and alignment depth of polyimide layers nematic liquid crystals)

RN 31134-18-6 CAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with [1,1'-biphenyl]-4,4'-diamine (9CI) (CA INDEX NAME)

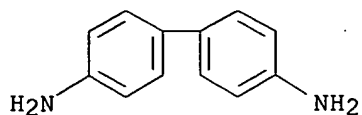
CM 1

CRN 2770-49-2
CMF C24 H10 O10



CM 2

CRN 92-87-5
CMF C12 H12 N2



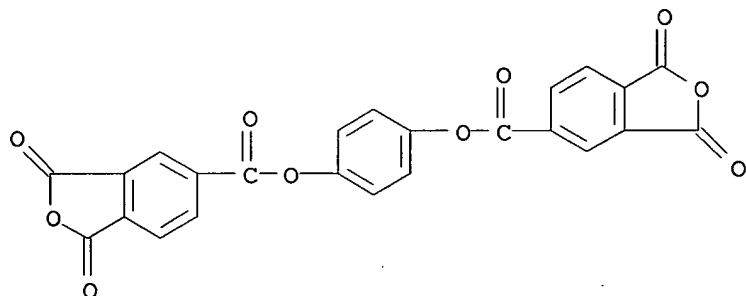
RN 31134-20-0 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 1,4-benzenediamine (9CI) (CA INDEX NAME)

CM 1

CRN 2770-49-2

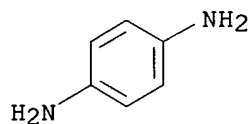
CMF C24 H10 O10



CM 2

CRN 106-50-3

CMF C6 H8 N2



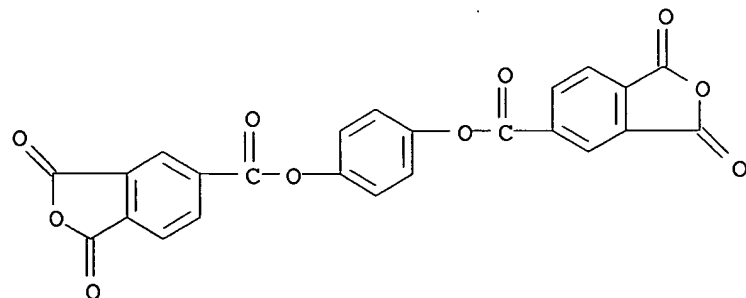
RN 31134-21-1 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine (9CI) (CA INDEX NAME)

CM 1

CRN 2770-49-2

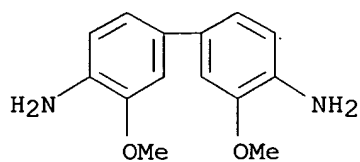
CMF C24 H10 O10



CM 2

CRN 119-90-4

CMF C14 H16 N2 O2



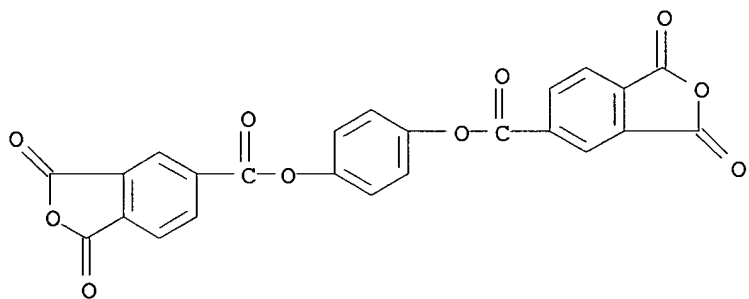
RN 31134-23-3 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 1,3-benzenediamine (9CI) (CA INDEX NAME)

CM 1

CRN 2770-49-2

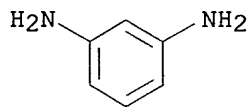
CMF C24 H10 O10



CM 2

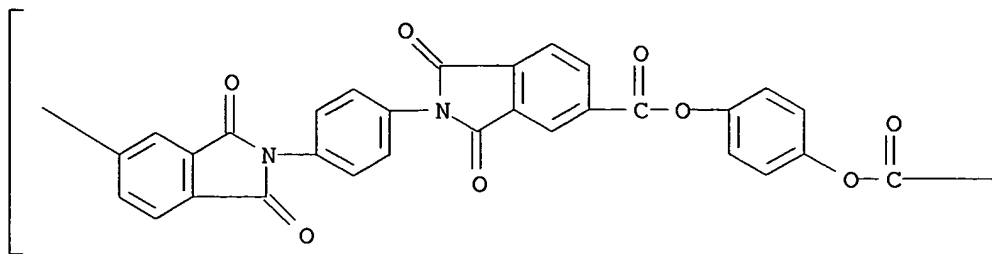
CRN 108-45-2

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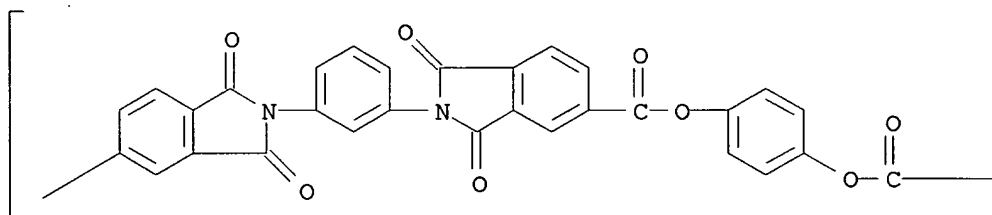


RN 36250-52-9 CAPLUS

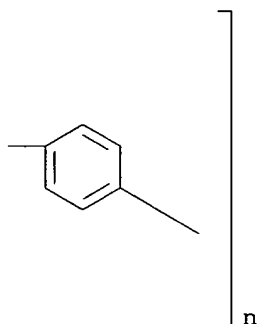
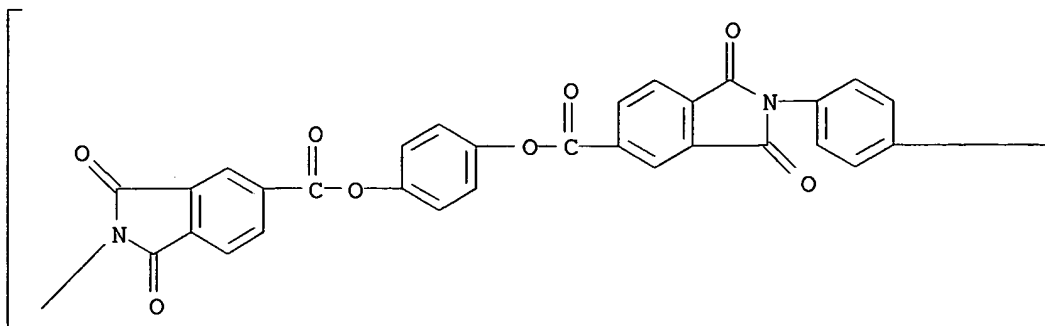
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyloxy-1,4-phenyleneoxycarbonyl] (9CI) (CA INDEX NAME)



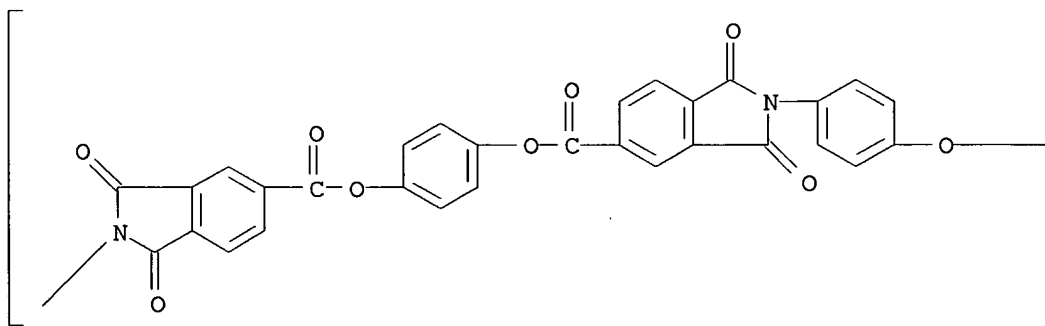
RN 36542-82-2 CAPLUS
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,3-phenylene(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyloxy-1,4-phenyleneoxycarbonyl] (9CI) (CA INDEX NAME)

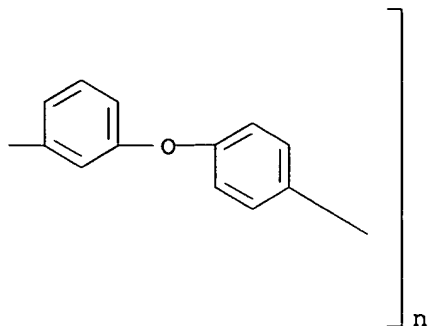


RN 36542-84-4 CAPLUS
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyloxy-1,4-phenyleneoxycarbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)[1,1'-biphenyl]-4,4'-diyl] (9CI) (CA INDEX NAME)



RN 61041-05-2 CAPLUS
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyloxy-1,4-phenyleneoxycarbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenyleneoxy-1,3-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)





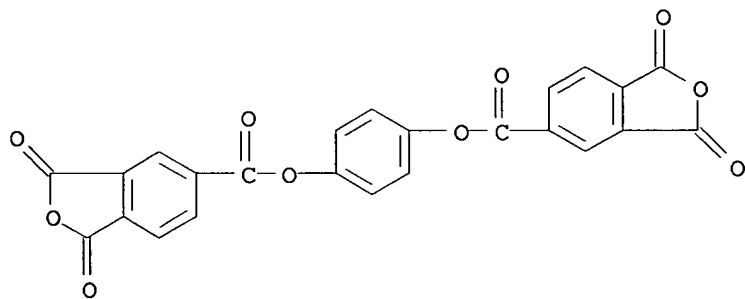
RN 61041-12-1 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-[1,3-phenylenebis(oxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2770-49-2

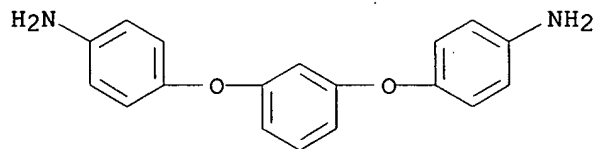
CMF C24 H10 O10



CM 2

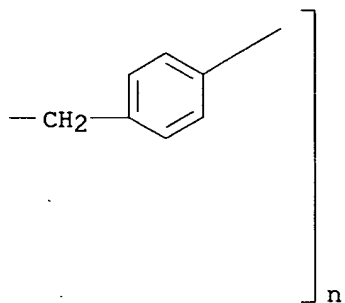
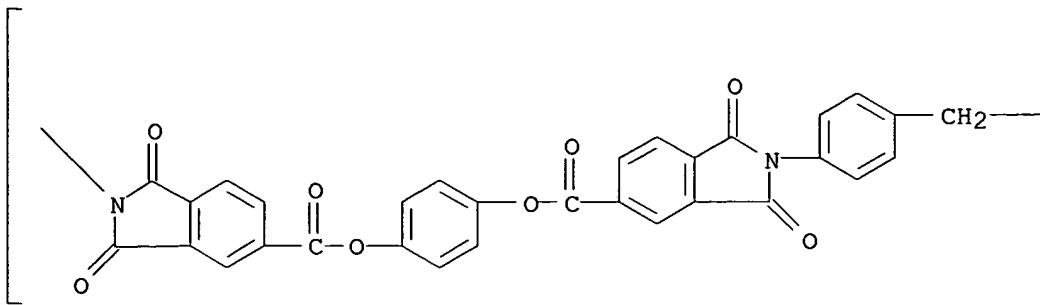
CRN 2479-46-1

CMF C18 H16 N2 O2

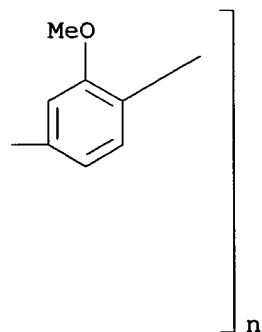
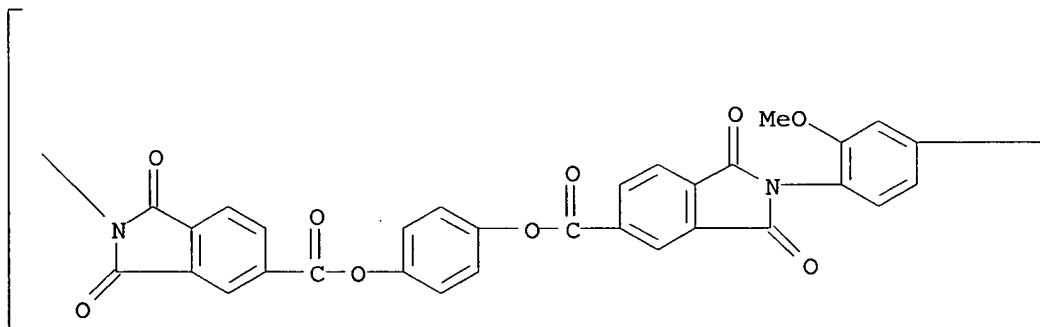


RN 175699-88-4 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyloxy-1,4-phenyleneoxycarbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-1,2-ethanediyl-1,4-phenylene] (9CI) (CA INDEX NAME)



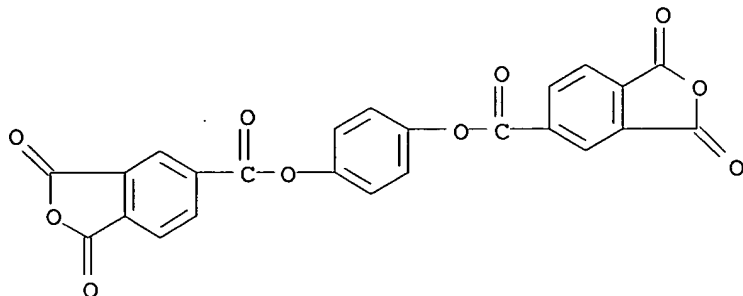
RN 175699-89-5 CAPLUS
 CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyloxy-1,4-phenyleneoxycarbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)] (9CI) (CA INDEX NAME)



RN 175699-90-8 CAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-(1,2-ethanediyl)bis[benzenamine] (9CI) (CA INDEX NAME)

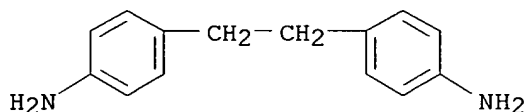
CM 1

CRN 2770-49-2
CMF C24 H10 O10



CM 2

CRN 621-95-4
CMF C14 H16 N2



L12 ANSWER 13 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:874049 CAPLUS

DOCUMENT NUMBER: 123:286797

TITLE: Design of molecular architectures for
polymeric mesophase formation

AUTHOR(S): Pugh, Coleen; Liu, Hui; Arehart, Stephen V.;
Narayanan, Ramasubramanian

CORPORATE SOURCE: Department of Chemistry, University of Michigan, Ann
Arbor, MI, 48109-1055, USA

SOURCE: Macromolecular Symposia (1995), 98(35th
IUPAC International Symposium on Macromolecules,
1995), 293-310

CODEN: MSYMEC; ISSN: 1022-1360

PUBLISHER: Huethig & Wepf

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Due to the tendency of low-mol.-weight liquid crystals composed of extended mesogens sym. disubstituted with long n-alkoxy substituents to exhibit smectic C mesophases, side-chain liquid-crystalline polymers with laterally attached (vs. terminally attached) mesogens offer an ideal architecture for obtaining sc^* mesophases. In particular, mesogens that typically form the desirable sc^*-n phase sequence can be laterally attached to the polymer backbone through a chiral spacer, which should result in high values of spontaneous polymerization. Mesogens which exhibit sc^*-n phase sequences are used, and smectic layering into systems which typically form nematic mesophases is attempted by using immiscible hydrocarbon/fluorocarbon components and electron-donor-acceptor interactions. The thermotropic behavior of poly{5-[[[2',5'-bis[(3''-fluoro-4''-dimethoxyphenyl)ethynyl]benzyl]oxy]carbonyl]bicyclo[2.2.1]hept-

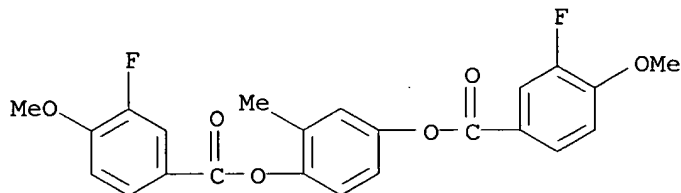
2-ene)s and poly{5-[[[2',5'-bis[(3''-fluoro-4''-methoxybenzoyl)oxy]benzyl]oxy]carbonyl]bicyclo[2.2.1]hept-2-ene}s correspond to that of their low-mol.-weight analogs. Preliminary results demonstrate that smectic layering is successfully induced in 2,5-bis[(4'-n-alkoxybenzoyl)oxy]toluenes and polynorbornenes with laterally attached 2,5-bis[(4'-n-alkoxybenzoyl)oxy]benzyl mesogens by terminating the n-alkoxy substituents with perfluorinated segments.

IT **169786-54-3P**

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation, thermotropic behavior, and smectic layering of side-chain liquid-crystalline fluoropolymers with laterally attached mesogens, monomers, and model compds.)

RN 169786-54-3 CAPLUS

CN Benzoic acid, 3-fluoro-4-methoxy-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

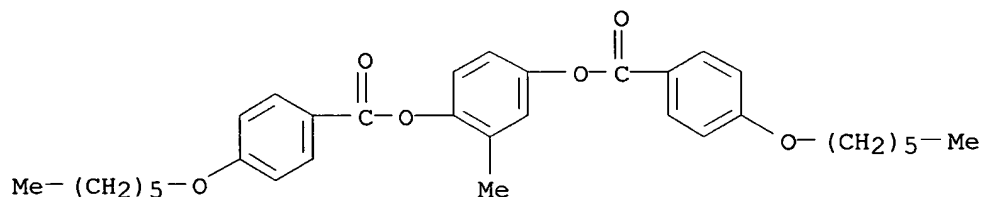


IT **26314-54-5P 51933-65-4P 66786-95-6P**
76387-01-4P 76387-02-5P 76387-03-6P
169786-36-1P 169786-37-2P 169786-38-3P
169786-39-4P 169786-40-7P 169786-41-8P
169786-42-9P 169786-43-0P 169786-55-4P
169786-58-7P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation, thermotropic behavior, and smectic layering of side-chain liquid-crystalline fluoropolymers with laterally attached mesogens, monomers, and model compds.)

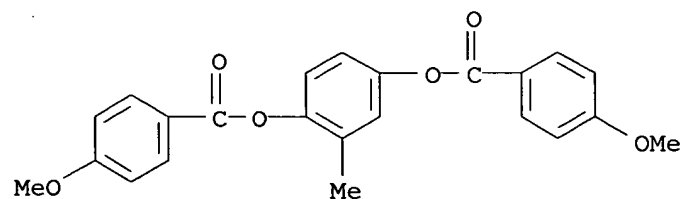
RN 26314-54-5 CAPLUS

CN Benzoic acid, 4-(hexyloxy)-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



RN 51933-65-4 CAPLUS

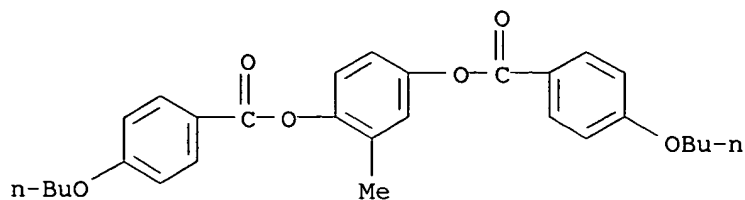
CN Benzoic acid, 4-methoxy-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



RN 66786-95-6 CAPLUS

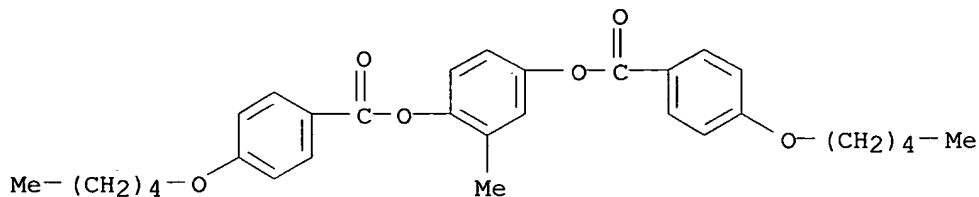
CN Benzoic acid, 4-butoxy-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

NAME)



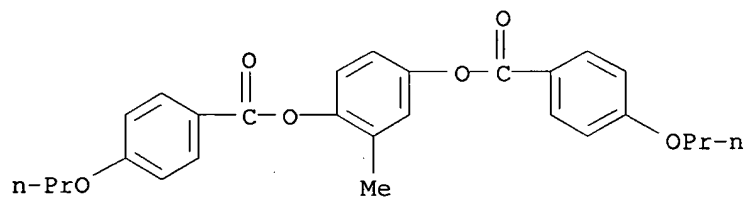
RN 76387-01-4 CAPLUS

CN Benzoic acid, 4-(pentyloxy)-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



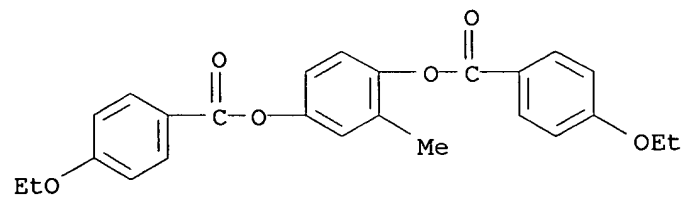
RN 76387-02-5 CAPLUS

CN Benzoic acid, 4-propoxy-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



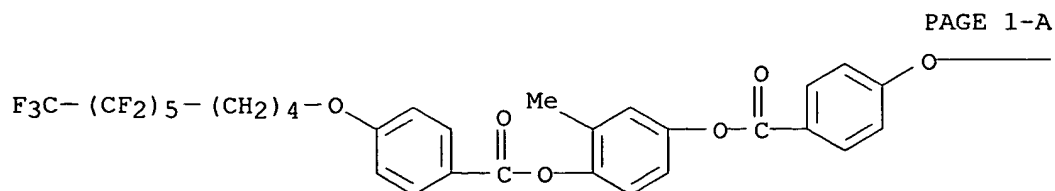
RN 76387-03-6 CAPLUS

CN Benzoic acid, 4-ethoxy-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



RN 169786-36-1 CAPLUS

CN Benzoic acid, 4-[(5,5,6,6,7,7,8,8,9,9,10,10,10-tridecafluorodecyl)oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



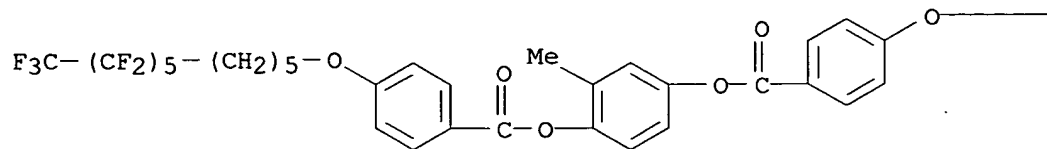
PAGE 1-A

— (CH₂)₄— (CF₂)₅— CF₃

RN 169786-37-2 CAPLUS

CN Benzoic acid, 4-[(6,6,7,7,8,8,9,9,10,10,11,11,11-tridecafluoroundecyl)oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

PAGE 1-A



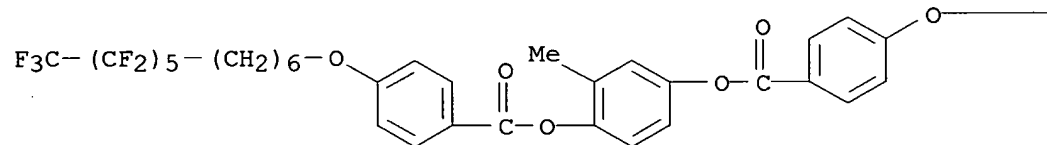
PAGE 1-B

— (CH₂)₅— (CF₂)₅— CF₃

RN 169786-38-3 CAPLUS

CN Benzoic acid, 4-[(7,7,8,8,9,9,10,10,11,11,12,12,12-tridecafluorododecyl)oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

PAGE 1-A



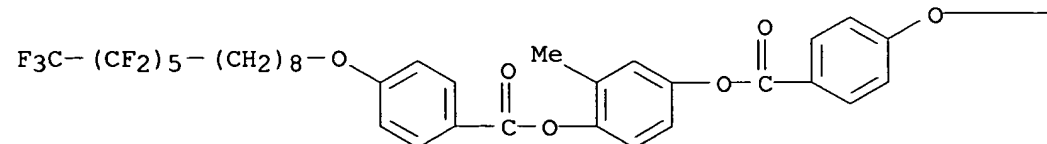
PAGE 1-B

— (CH₂)₆— (CF₂)₅— CF₃

RN 169786-39-4 CAPLUS

CN Benzoic acid, 4-[(9,9,10,10,11,11,12,12,13,13,14,14,14-tridecafluorotetradecyl)oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

PAGE 1-A

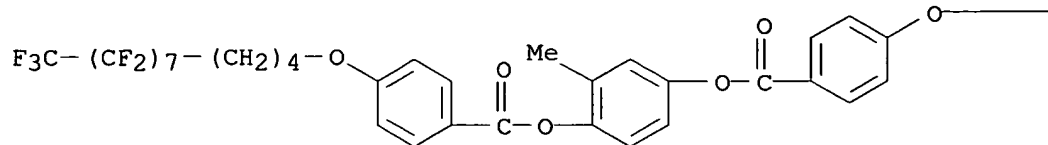


PAGE 1-B

— (CH₂)₈— (CF₂)₅— CF₃

RN 169786-40-7 CAPLUS
 CN Benzoic acid, 4-[(5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heptadecafluorododecyl)oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

PAGE 1-A

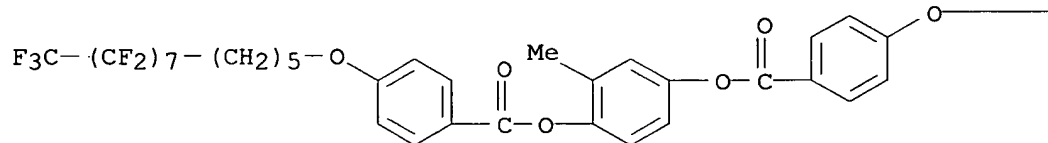


PAGE 1-B

— (CH₂)₄—(CF₂)₇—CF₃

RN 169786-41-8 CAPLUS
 CN Benzoic acid, 4-[(6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,13-heptadecafluorotridecyl)oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

PAGE 1-A

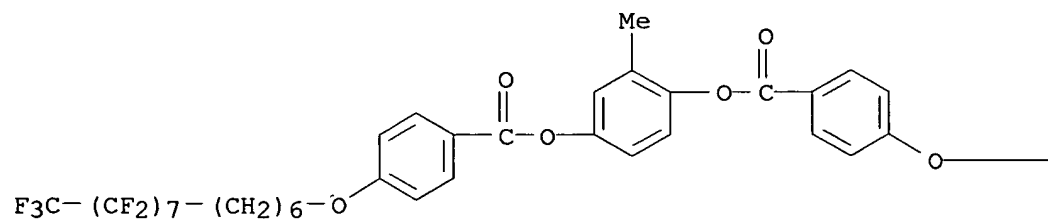


PAGE 1-B

— (CH₂)₅—(CF₂)₇—CF₃

RN 169786-42-9 CAPLUS
 CN Benzoic acid, 4-[(7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-heptadecafluorotetradecyl)oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

PAGE 1-A

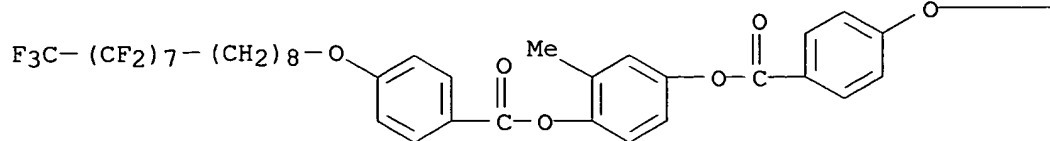


PAGE 1-B

— (CH₂)₆—(CF₂)₇—CF₃

RN 169786-43-0 CAPLUS
 CN Benzoic acid, 4-[(9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,16-heptafluorohexadecyl)oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

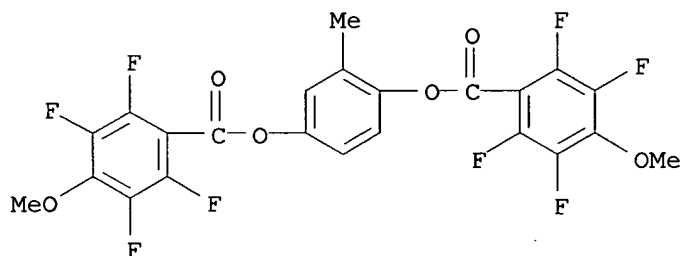
PAGE 1-A



PAGE 1-B

— (CH₂)₈— (CF₂)₇— CF₃

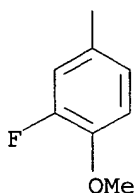
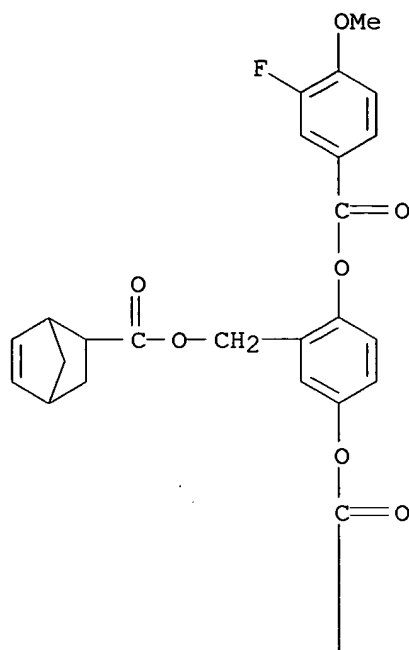
RN 169786-55-4 CAPLUS
 CN Benzoic acid, 2,3,5,6-tetrafluoro-4-methoxy-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



RN 169786-58-7 CAPLUS
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, [2,5-bis[(3-fluoro-4-methoxybenzoyl)oxy]phenyl]methyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 169786-57-6
 CMF C31 H26 F2 O8



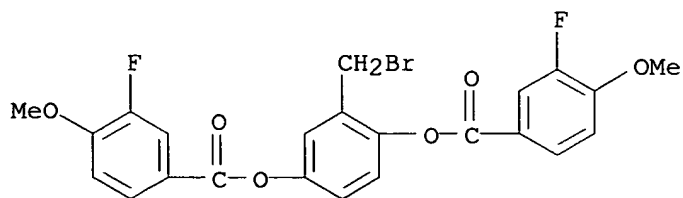
IT 169786-56-5P 169786-57-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation, thermotropic behavior, and smectic layering of side-chain liquid-crystalline fluoropolymers with laterally attached mesogens, monomers, and model compds.)

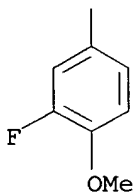
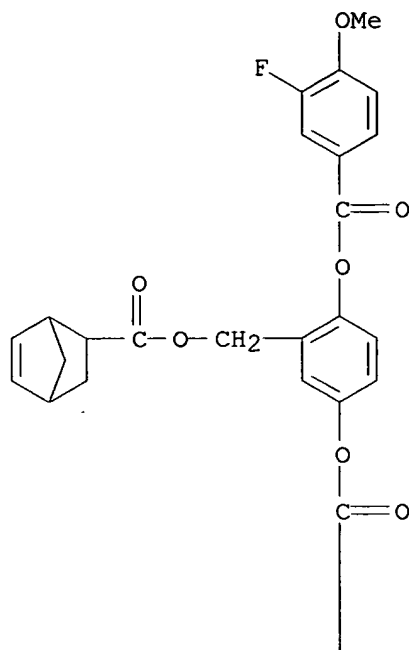
RN 169786-56-5 CAPLUS

CN Benzoic acid, 3-fluoro-4-methoxy-, 2-(bromomethyl)-1,4-phenylene ester (9CI) (CA INDEX NAME)



RN 169786-57-6 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, [2,5-bis[(3-fluoro-4-methoxybenzoyl)oxy]phenyl]methyl ester (9CI) (CA INDEX NAME)



L12 ANSWER 14 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:559639 CAPLUS

DOCUMENT NUMBER: 122:293130

TITLE: Melt-processable flexible liquid crystalline block copolyesterimide, its manufacture, and potential use

INVENTOR(S): Boehme, Frank; Pospiech, Doris; Raetzsch, Manfred; Bergstrom, Christer; Harkonen, Mika; Alanko, Heli; Passiniemi, Pentti

PATENT ASSIGNEE(S): Neste Oy, Finland

SOURCE: PCT Int. Appl., 28 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

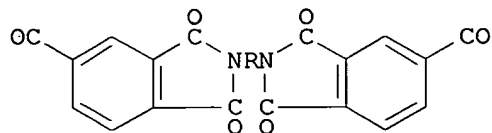
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9406846	A1	19940331	WO 1993-FI374	19930917 <--
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RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
FI 9204200	A	19940319	FI 1992-4200	19920918 <--
FI 94054	B	19950331		
FI 94054	C	19950710		
EP 660854	A1	19950705	EP 1993-919377	19930917 <--
EP 660854	B1	19981111		
R: AT, BE, CH, DE, DK, FR, GB, IT, LI, NL, SE				

JP 08500632	T2	19960123	JP 1993-507830	19930917 <--
JP 2834580	B2	19981209		
JP 10279681	A2	19981020	JP 1998-69010	19930917 <--
AT 173283	E	19981115	AT 1993-919377	19930917 <--
NO 9501033	A	19950317	NO 1995-1033	19950317 <--
US 5677394	A	19971014	US 1995-406859	19950428 <--
PRIORITY APPLN. INFO.:			FI 1992-4200	A 19920918
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GI



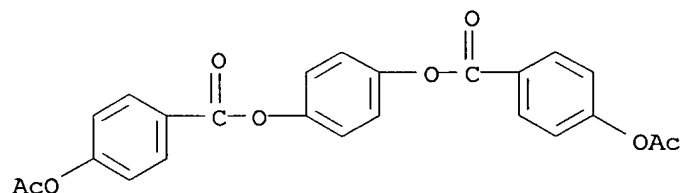
I

AB The title elastomers comprising the repeating units (I) 5-50, COC6H4O 10-80, and OC6H3Z-p-(C6H3Z)ZO 5-50, and, optionally, COC6H3Z'CO 0-45 mol%, wherein R = an aliphatic polyether chain and/or a polysiloxane chain; Z = H, alkyl, alkoxy, aryl, halogen and w = 0 or 1; and Z' = H, alkyl, alkoxy, aryl or halogen and the phenylene ring is substituted in m- or p-position. Polymerization of trimellitimide-terminated poly(tetrahydrofuran) 8.6, MeCOO-p-C6H4COO-p-C6H4OOC-p-C6H4OOCMe 3.30, and p-acetoxybenzoic acid 1.18 g gave a block elastomer. having inherent viscosity (PhOH/1,1,2,2-tetrachloroethane; 0.5 dL/g; 25°) 0.757 dL/g.

IT **79066-38-9DP**, polymer with trimellitimide-terminated siloxane and acetoxybenzoic acid
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (melt-processable flexible liquid crystalline block copolyesterimide)

RN 79066-38-9 CAPLUS

CN Benzoic acid, 4-(acetyloxy)-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



IT **163151-37-9P 163151-41-5P**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (rubber, from trimellitimide-terminated THF polymer precursor;
 melt-processable flexible liquid crystalline block copolyesterimide)

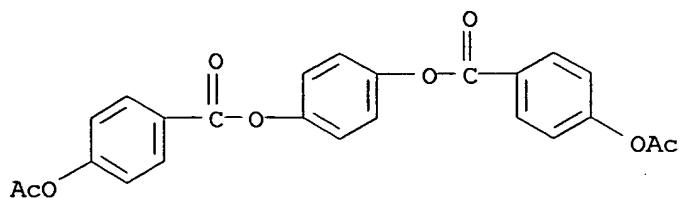
RN 163151-37-9 CAPLUS

CN Benzoic acid, 4-(acetyloxy)-, 1,4-phenylene ester, polymer with 4-(acetyloxy)benzoic acid and α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl), block (9CI) (CA INDEX NAME)

CM 1

CRN 79066-38-9

CMF C24 H18 O8

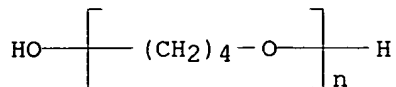


CM 2

CRN 25190-06-1

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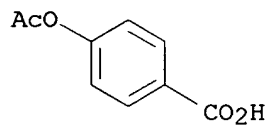
CCI PMS



CM 3

CRN 2345-34-8

CMF C9 H8 O4



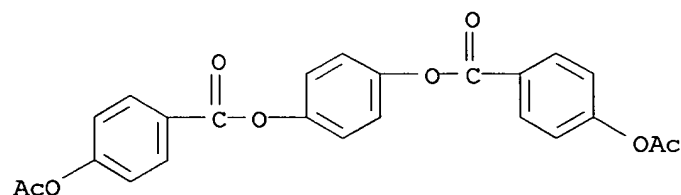
RN 163151-41-5 CAPLUS

CM 1,4-Benzenedicarboxylic acid, polymer with 4-(acetyloxy)benzoic acid, α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) and 1,4-phenylene bis[4-(acetyloxy)benzoate], block (9CI) (CA INDEX NAME)

CM 1

CRN 79066-38-9

CMF C24 H18 O8

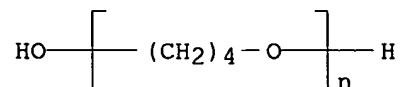


CM 2

CRN 25190-06-1

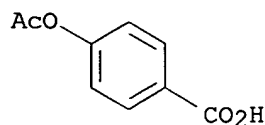
CMF (C4 H8 O)_n H2 O

CCI PMS



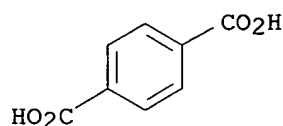
CM 3

CRN 2345-34-8
CMF C9 H8 O4



CM 4

CRN 100-21-0
CMF C8 H6 O4



L12 ANSWER 15 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:261309 CAPLUS
DOCUMENT NUMBER: 122:291788
TITLE: Perfluorocyclobutane ring-containing polymers
INVENTOR(S): Babb, David A.; Richey, W. Frank; Clement, Katherine S.; Ezzell, Bobby R.
PATENT ASSIGNEE(S): Dow Chemical Co., USA
SOURCE: U.S., 33 pp. Cont.-in-part of U.S. Ser. No. 54,648, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5364917	A	19941115	US 1993-159892	19931201 <--
US 5037917	A	19910806	US 1989-364667	19890609 <--
US 5066746	A	19911119	US 1990-534819	19900607 <--
US 5159038	A	19921027	US 1991-673882	19910322 <--
US 5159037	A	19921027	US 1991-720553	19910625 <--
CA 2159910	AA	19941110	CA 1994-2159910	19940419 <--
WO 9425505	A1	19941110	WO 1994-US4273	19940419 <--

W: CA, JP, US, US

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

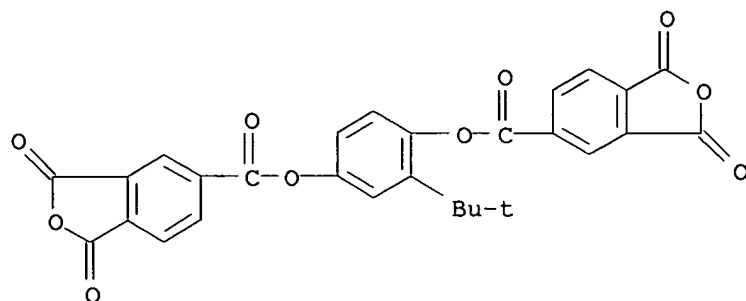
PRIORITY APPLN. INFO.:
US 1989-364667 A3 19890609
US 1991-673882 A3 19910322
US 1992-929742 B2 19920813
US 1993-54648 B2 19930426
US 1990-534819 A3 19900607
US 1993-159892 A 19931201

AB Title polymers are manufactured by heating monomers having ≥ 2 dimerizable perfluorovinyl groups or by polycondensing monomers having perfluorocyclobutane groups. Thus, sequentially heating 4,4'-bis(trifluorovinyloxy)biphenyl 2 h at 210°, 3 h at 235°, and 45 min at 265° gave a polymer with glass temperature 143°.

IT 134247-82-8P

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-,
2-(1,1-dimethylethyl)-1,4-phenylene ester (9CI) (CA INDEX NAME)



IT 30940-61-5P 31134-25-5P 36250-53-0P
36496-90-9P 110651-45-1P 159538-74-6P
159538-82-6P 159538-83-7P 159538-84-8P
159538-85-9P 159538-86-0P 159538-87-1P
159538-88-2P 159538-89-3P 159538-90-6P
159538-91-7P 159538-92-8P 159538-93-9P
159538-94-0P 159538-95-1P 159538-96-2P
159538-97-3P 159538-98-4P 159538-99-5P
159539-03-4P 159539-04-5P 159539-05-6P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(liquid crystal; synthesis and chain structure and phys. properties of
(thermotropic) poly(ester-imide))

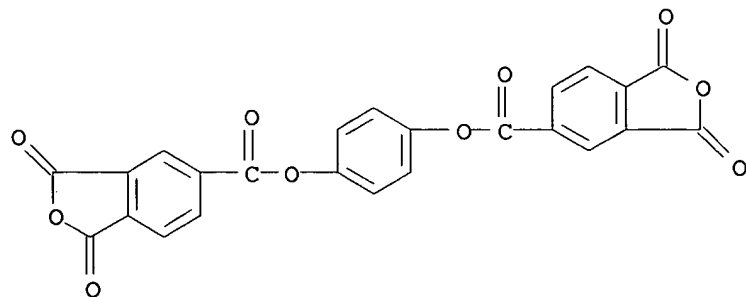
RN 30940-61-5 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene
ester, polymer with 4',4'-methylenebis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2770-49-2

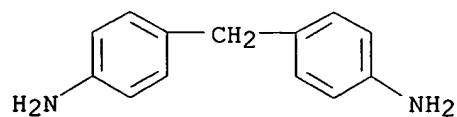
CMF C24 H10 O10



CM 2

CRN 101-77-9

CMF C13 H14 N2



RN 31134-25-5 CAPLUS

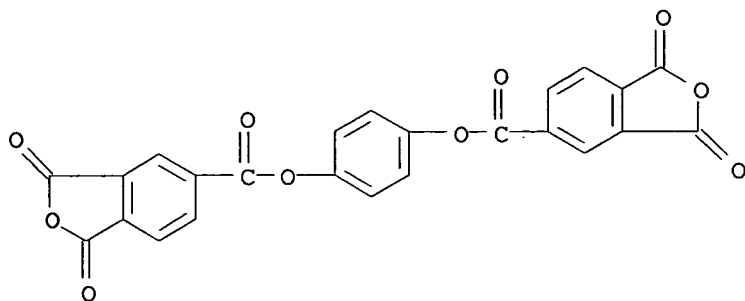
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene

ester, polymer with 1,6-hexanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 2770-49-2

CMF C24 H10 O10



CM 2

CRN 124-09-4

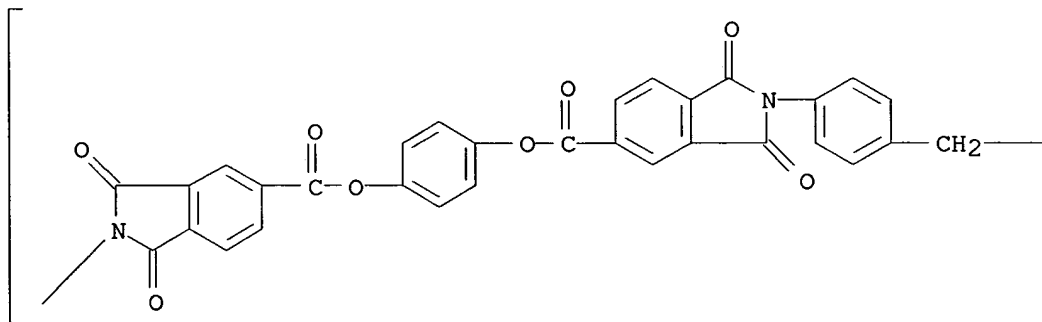
CMF C6 H16 N2

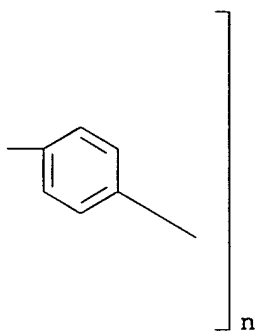
H₂N-(CH₂)₆-NH₂

RN 36250-53-0 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl) carbonyloxy-1,4-phenyleneoxycarbonyl (1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylenemethylene-1,4-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A

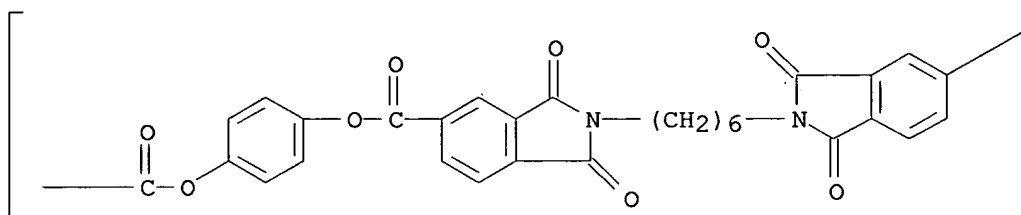




RN 36496-90-9 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,6-hexanediyl(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyloxy-1,4-phenyleneoxycarbonyl] (9CI) (CA INDEX NAME)

PAGE 1-A



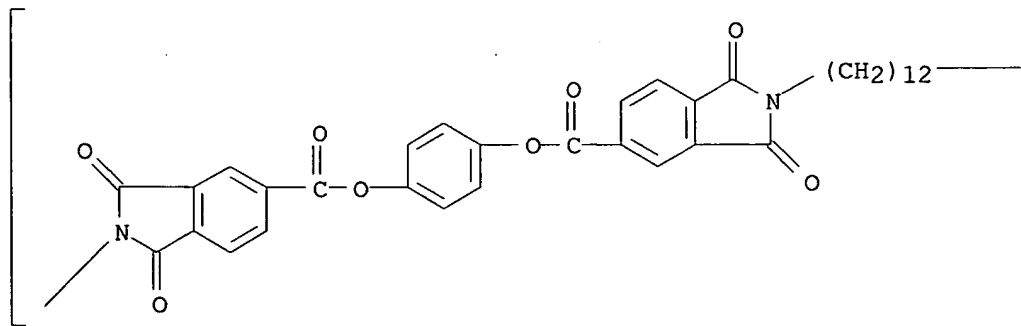
PAGE 1-B



RN 110651-45-1 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyloxy-1,4-phenyleneoxycarbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,12-dodecanediyl] (9CI) (CA INDEX NAME)

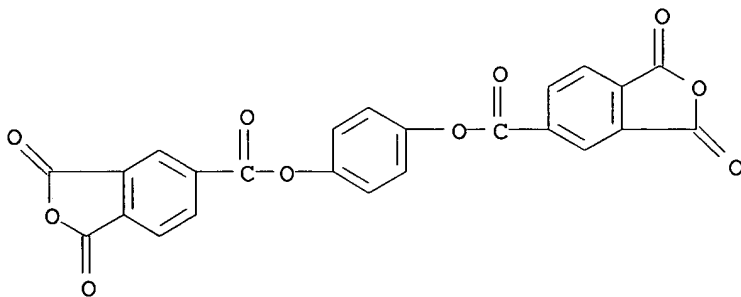
PAGE 1-A



RN 159538-74-6 CAPLUS
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4-methyl-1,3-benzenediamine (9CI) (CA INDEX NAME)

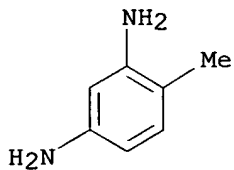
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CRN 2770-49-2
 CMF C24 H10 O10



CM 2

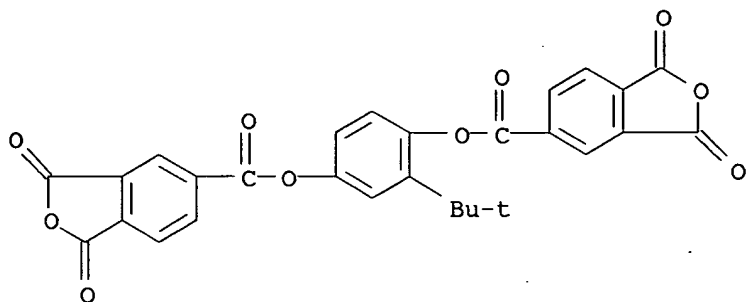
CRN 95-80-7
 CMF C7 H10 N2



RN 159538-82-6 CAPLUS
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 2-(1,1-dimethylethyl)-1,4-phenylene ester, polymer with 4,4'-methylenebis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

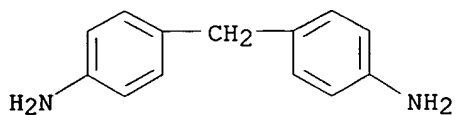
CRN 159538-73-5
 CMF C28 H18 O10



CM 2

CRN 101-77-9

CMF C13 H14 N2



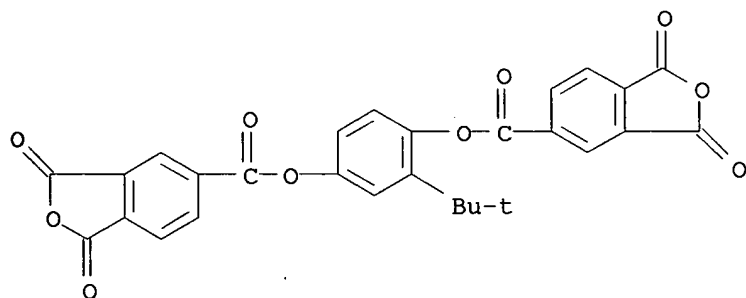
RN 159538-83-7 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-,
2-(1,1-dimethylethyl)-1,4-phenylene ester, polymer with
4,4'-oxybis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 159538-73-5

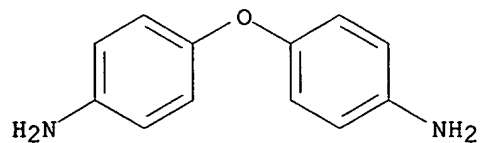
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CM 2

CRN 101-80-4

CMF C12 H12 N2 O



RN 159538-84-8 CAPLUS

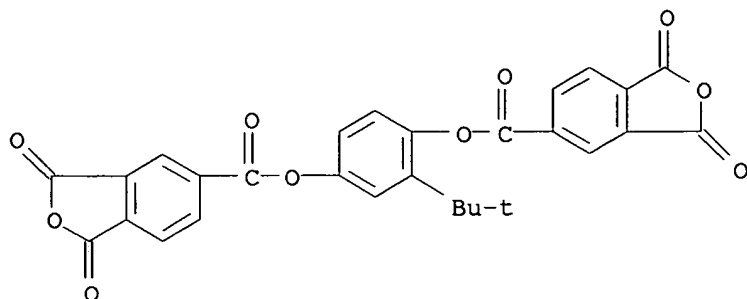
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-,
2-(1,1-dimethylethyl)-1,4-phenylene ester, polymer with
4,4'-oxybis[benzenamine] (9CI) (CA INDEX NAME)

4-methyl-1,3-benzenediamine (9CI) (CA INDEX NAME)

CM 1

CRN 159538-73-5

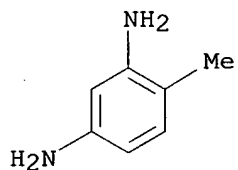
CMF C28 H18 O10



CM 2

CRN 95-80-7

CMF C7 H10 N2



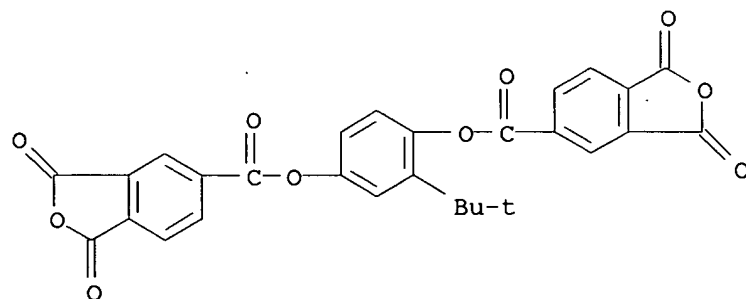
RN 159538-85-9 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-,
2-(1,1-dimethylethyl)-1,4-phenylene ester, polymer with 1,6-hexanediamine
(9CI) (CA INDEX NAME)

CM 1

CRN 159538-73-5

CMF C28 H18 O10



CM 2

CRN 124-09-4

CMF C6 H16 N2

H₂N-(CH₂)₆-NH₂

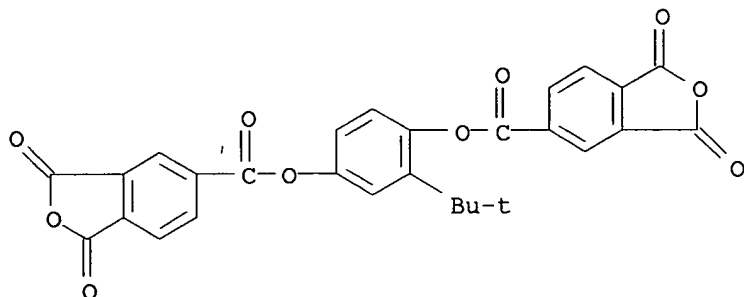
RN 159538-86-0 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-,
2-(1,1-dimethylethyl)-1,4-phenylene ester, polymer with
1,12-dodecanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 159538-73-5

CMF C28 H18 O10



CM 2

CRN 2783-17-7

CMF C12 H28 N2

H₂N-(CH₂)₁₂-NH₂

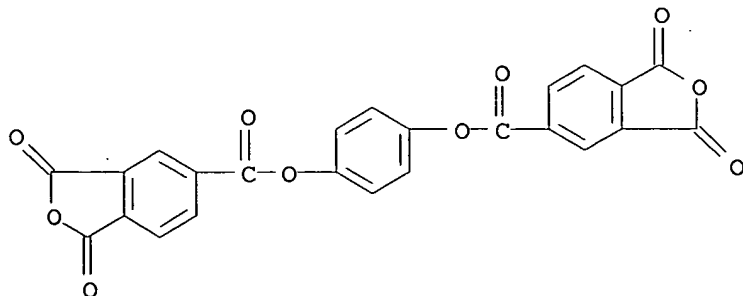
RN 159538-87-1 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene
ester, polymer with 1,4-benzenedicarbonyl dichloride and
4,4'-methylenabis[benzenamine], block (9CI) (CA INDEX NAME)

CM 1

CRN 2770-49-2

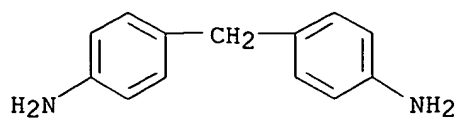
CMF C24 H10 O10



CM 2

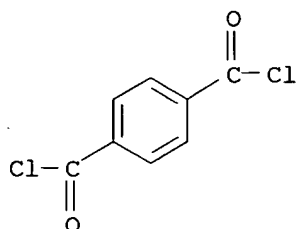
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CMF C13 H14 N2



CM 3

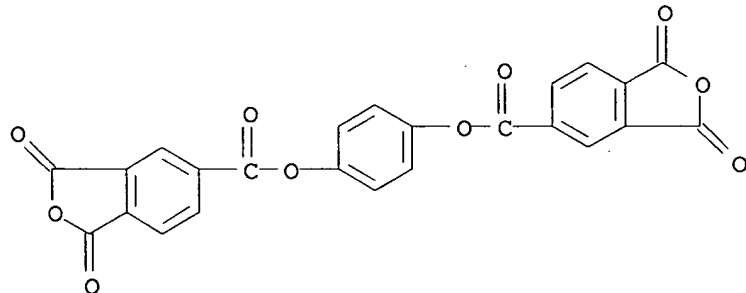
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CMF C8 H4 Cl2 O2



RN 159538-88-2 CAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 1,3-benzenedicarbonyl dichloride and 4,4'-methylenedianiline, block (9CI) (CA INDEX NAME)

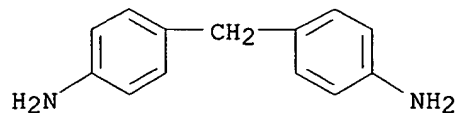
CM 1

CRN 2770-49-2
CMF C24 H10 O10



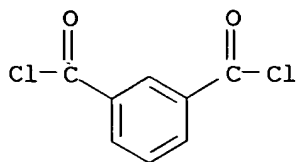
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CRN 101-77-9
CMF C13 H14 N2



CM 3

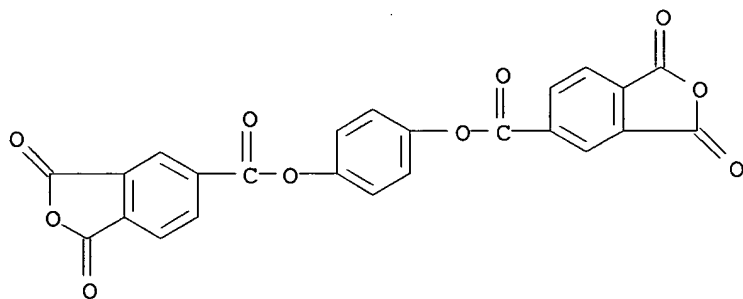
CRN 99-63-8
CMF C8 H4 Cl2 O2



RN 159538-89-3 CAPLUS
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 4,4'-methylenebis[benzenamine] and 2,6-naphthalenedicarbonyl dichloride, block (9CI) (CA INDEX NAME)

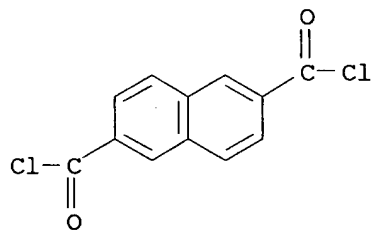
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CRN 2770-49-2
 CMF C24 H10 O10



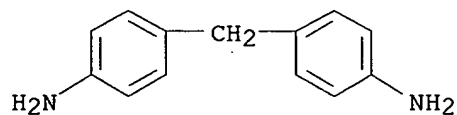
CM 2

CRN 2351-36-2
 CMF C12 H6 Cl2 O2



CM 3

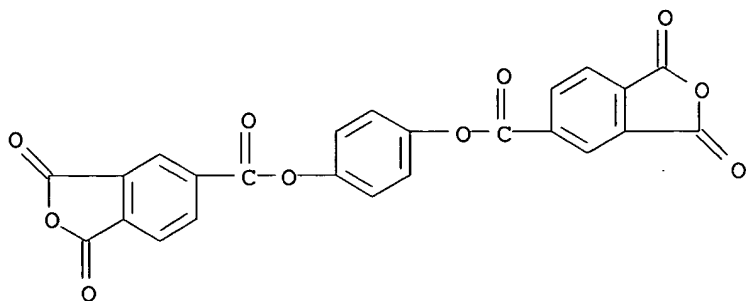
CRN 101-77-9
 CMF C13 H14 N2



RN 159538-90-6 CAPLUS
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with hexanedioyl dichloride and 4,4'-methylenebis[benzenamine], block (9CI) (CA INDEX NAME)

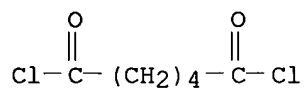
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CMF C24 H10 O10



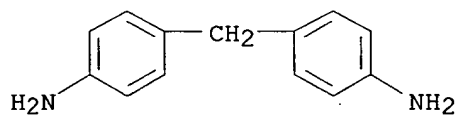
CM 2

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CMF C6 H8 Cl2 O2



CM 3

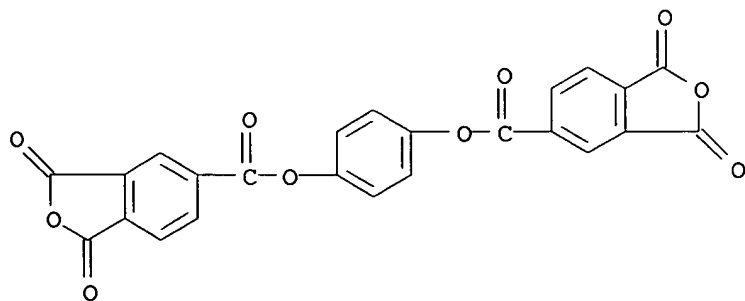
CRN 101-77-9
CMF C13 H14 N2



RN 159538-91-7 CAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with dichlorodimethylsilane and 4,4'-methylenebis[benzenamine], block (9CI) (CA INDEX NAME)

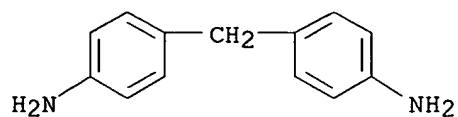
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CRN 2770-49-2
CMF C24 H10 O10



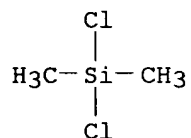
CM 2

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CM 3

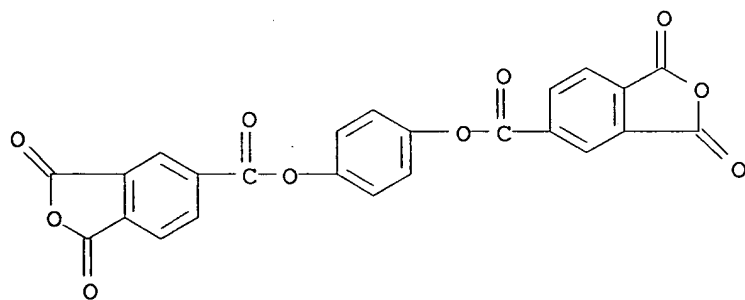
CRN 75-78-5
CMF C2 H6 Cl2 Si



RN 159538-92-8 CAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 1,3-dichloro-1,1,3,3-tetramethyldisiloxane and 4,4'-methylenebis[benzenamine], block (9CI) (CA INDEX NAME)

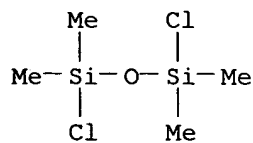
CM 1

CRN 2770-49-2
CMF C24 H10 O10



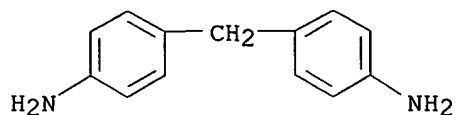
CM 2

CRN 2401-73-2
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CM 3

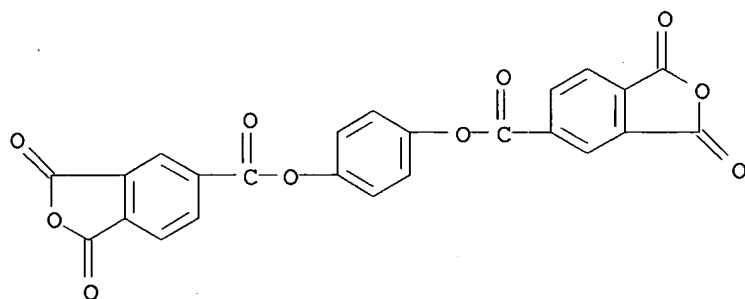
CRN 101-77-9
CMF C13 H14 N2



RN 159538-93-9 CAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 1,4-benzenedicarbonyl dichloride and 4,4'-oxybis[benzenamine], block (9CI) (CA INDEX NAME)

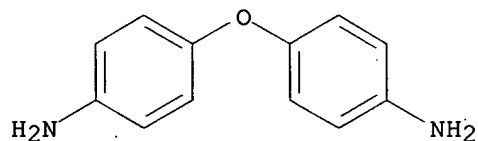
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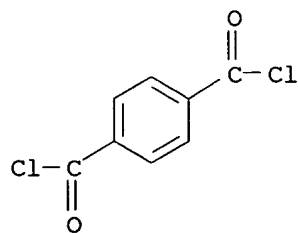
CM 2

CRN 101-80-4
CMF C12 H12 N2 O



CM 3

CRN 100-20-9
CMF C8 H4 Cl2 O2



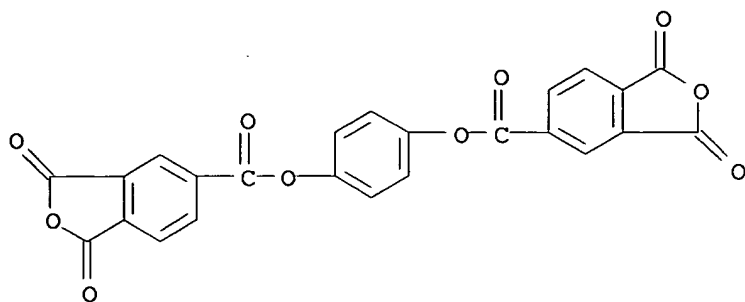
RN 159538-94-0 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 1,3-benzenedicarbonyl dichloride and 4,4'-oxybis[benzenamine], block (9CI) (CA INDEX NAME)

CM 1

CRN 2770-49-2

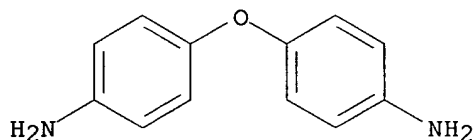
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CM 2

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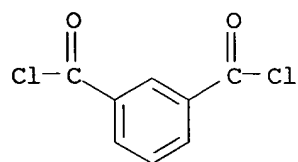
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CM 3

CRN 99-63-8

CMF C8 H4 Cl2 O2



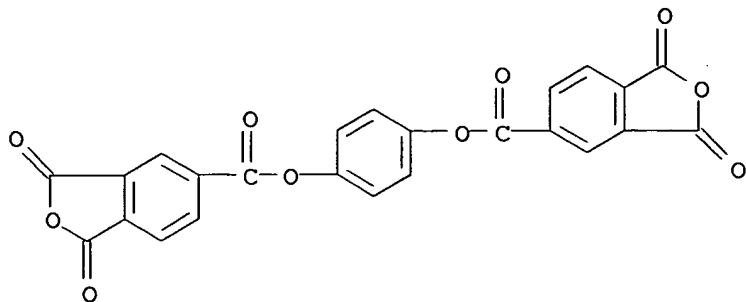
RN 159538-95-1 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 2,6-naphthalenedicarbonyl dichloride and 4,4'-oxybis[benzenamine], block (9CI) (CA INDEX NAME)

CM 1

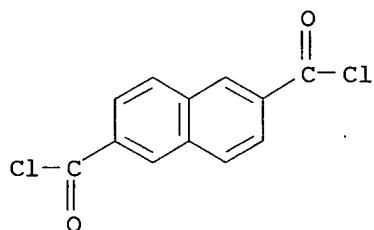
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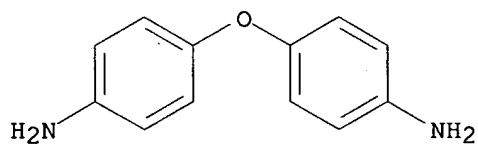
CM 2

CRN 2351-36-2
CMF C12 H6 C12 O2



CM 3

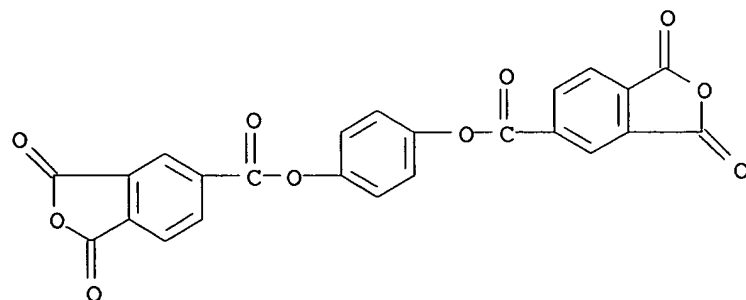
CRN 101-80-4
CMF C12 H12 N2 O



RN 159538-96-2 CAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with dichlorodimethylsilane and 4,4'-oxybis[benzenamine], block (9CI) (CA INDEX NAME)

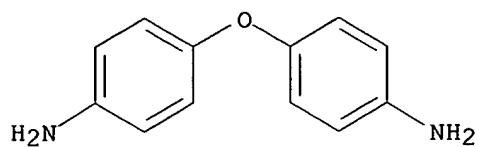
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CRN 2770-49-2
CMF C24 H10 O10



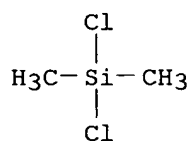
CM 2

CRN 101-80-4
CMF C12 H12 N2 O



CM 3

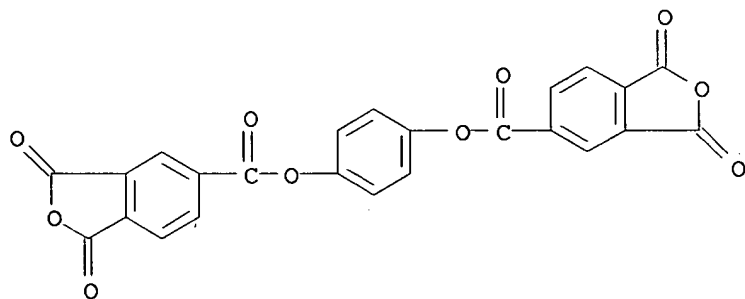
CRN 75-78-5
CMF C2 H6 Cl2 Si



RN 159538-97-3 CAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 1,4-benzenedicarbonyl dichloride and 4-methyl-1,3-benzenediamine, block (9CI) (CA INDEX NAME)

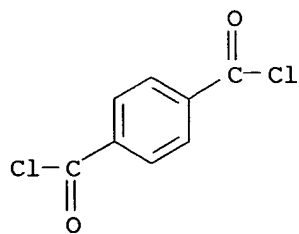
CM 1

CRN 2770-49-2
CMF C24 H10 O10



CM 2

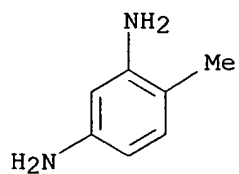
CRN 100-20-9
CMF C8 H4 Cl2 O2



CM 3

CRN 95-80-7

CMF C7 H10 N2



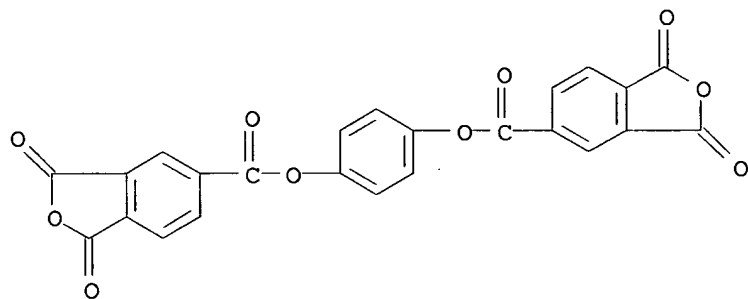
RN 159538-98-4 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 1,3-benzenedicarbonyl dichloride and 4-methyl-1,3-benzenediamine, block (9CI) (CA INDEX NAME)

CM 1

CRN 2770-49-2

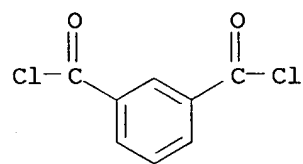
CMF C24 H10 O10



CM 2

CRN 99-63-8

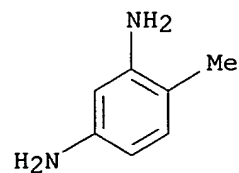
CMF C8 H4 Cl2 O2



CM 3

CRN 95-80-7

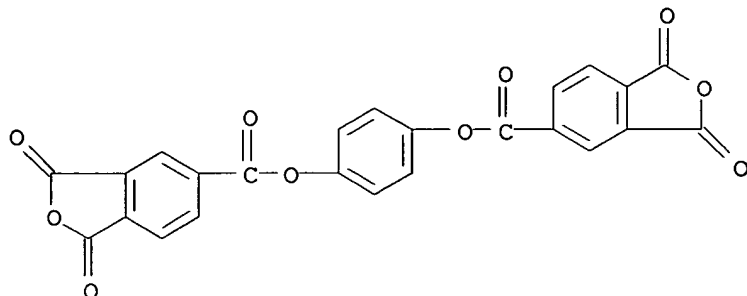
CMF C7 H10 N2



RN 159538-99-5 CAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene
ester, polymer with dichlorodimethylsilane and 4-methyl-1,3-
benzenediamine, block (9CI) (CA INDEX NAME)

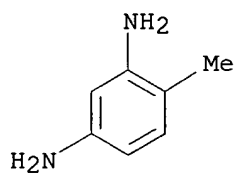
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CRN 2770-49-2
CMF C24 H10 O10



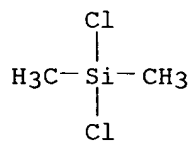
CM 2

CRN 95-80-7
CMF C7 H10 N2



CM 3

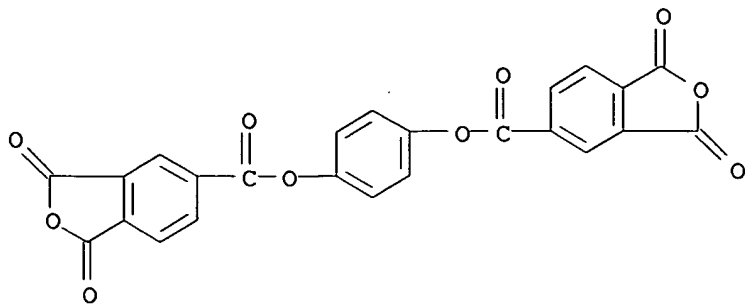
CRN 75-78-5
CMF C2 H6 Cl2 Si



RN 159539-03-4 CAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene
ester, polymer with 1,3-benzenediamine and 4,4'-methylenebis[benzenamine],
block (9CI) (CA INDEX NAME)

CM 1

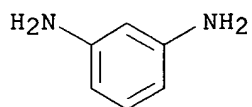
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CM 2

CRN 108-45-2

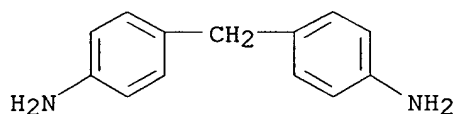
CMF C6 H8 N2



CM 3

CRN 101-77-9

CMF C13 H14 N2



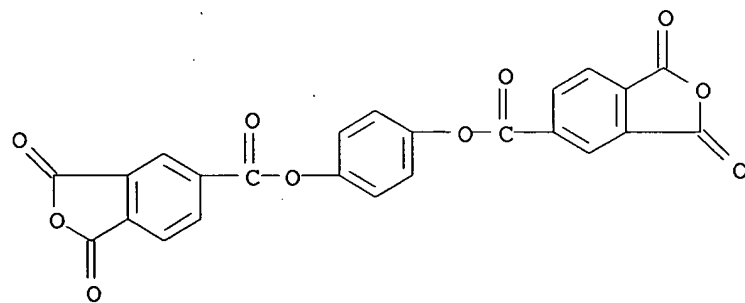
RN 159539-04-5 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 1,3-benzenediamine and 4,4'-oxybis[benzenamine], block (9CI) (CA INDEX NAME)

CM 1

CRN 2770-49-2

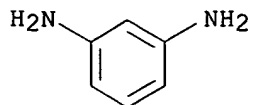
CMF C24 H10 O10



CM 2

CRN 108-45-2

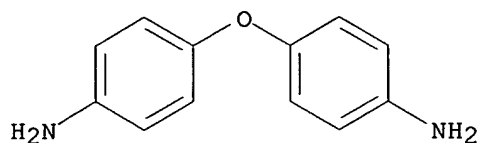
CMF C6 H8 N2



CM 3

CRN 101-80-4

CMF C12 H12 N2 O



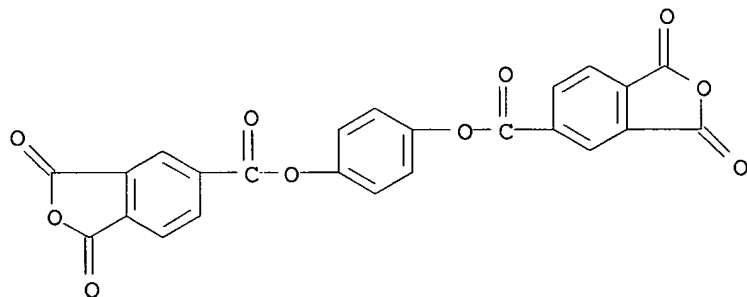
RN 159539-05-6 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 1,3-benzenediamine and 4-methyl-1,3-benzenediamine, block (9CI) (CA INDEX NAME)

CM 1

CRN 2770-49-2

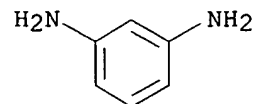
CMF C24 H10 O10



CM 2

CRN 108-45-2

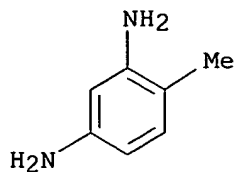
CMF C6 H8 N2



CM 3

CRN 95-80-7

CMF C7 H10 N2



IT 27084-65-7P 28982-28-7P 159538-75-7P

159539-00-1P 159539-01-2P 159539-02-3P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis and chain structure and phys. properties of (thermotropic)
poly(ester-imide))

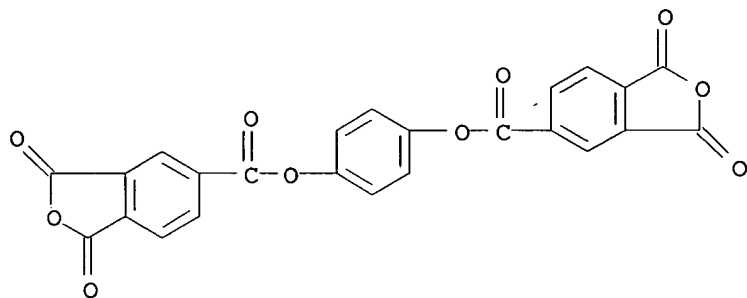
RN 27084-65-7 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene
ester, polymer with 4,4'-oxybis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2770-49-2

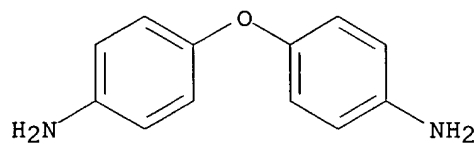
CMF C24 H10 O10



CM 2

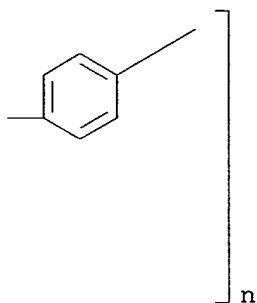
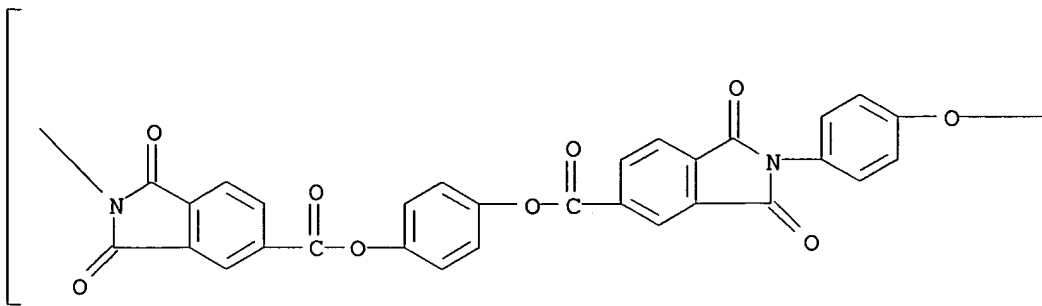
CRN 101-80-4

CMF C12 H12 N2 O



RN 28982-28-7 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyloxy-1,4-
phenyleneoxycarbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-
phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 159538-75-7 CAPLUS
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene
 ester, polymer with 1,12-dodecanediamine (9CI) (CA INDEX NAME)

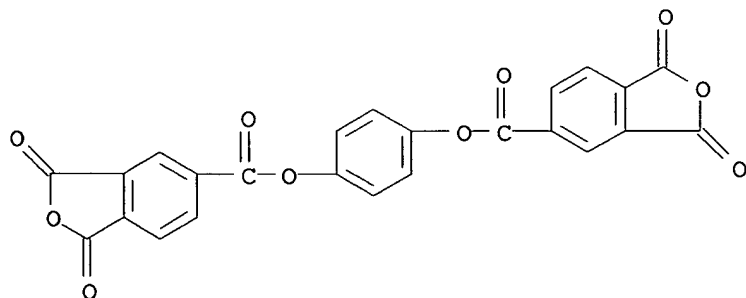
CM 1

CRN 2783-17-7
 CMF C12 H28 N2

$\text{H}_2\text{N}-(\text{CH}_2)_{12}-\text{NH}_2$

CM 2

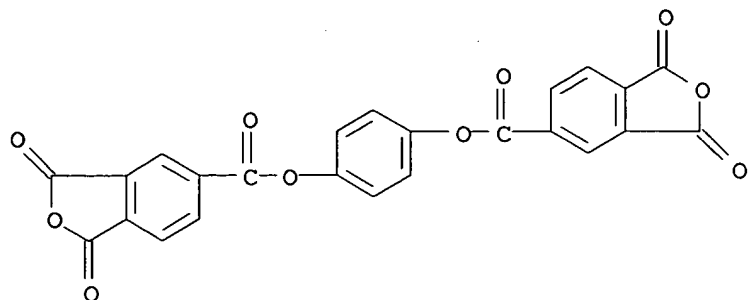
CRN 2770-49-2
 CMF C24 H10 O10



RN 159539-00-1 CAPLUS
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene
 ester, polymer with 1,4-benzenediamine and 4,4'-methylenabis[benzenamine],
 block (9CI) (CA INDEX NAME)

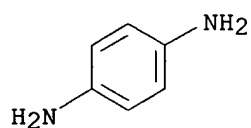
CM 1

CRN 2770-49-2
CMF C24 H10 O10



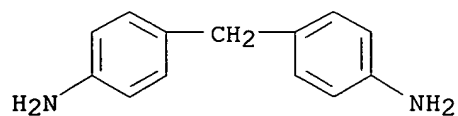
CM 2

CRN 106-50-3
CMF C6 H8 N2



CM 3

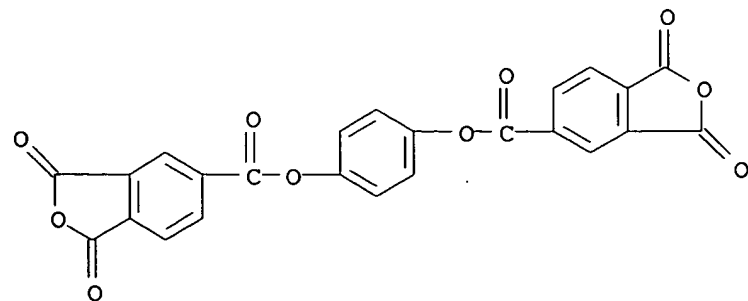
CRN 101-77-9
CMF C13 H14 N2



RN 159539-01-2 CAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 1,4-benzenediamine and 4,4'-oxybis[benzenamine], block (9CI) (CA INDEX NAME)

CM 1

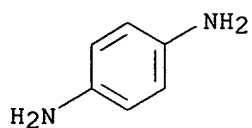
CRN 2770-49-2
CMF C24 H10 O10



CM 2

CRN 106-50-3

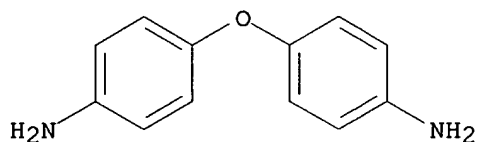
CMF C6 H8 N2



CM 3

CRN 101-80-4

CMF C12 H12 N2 O



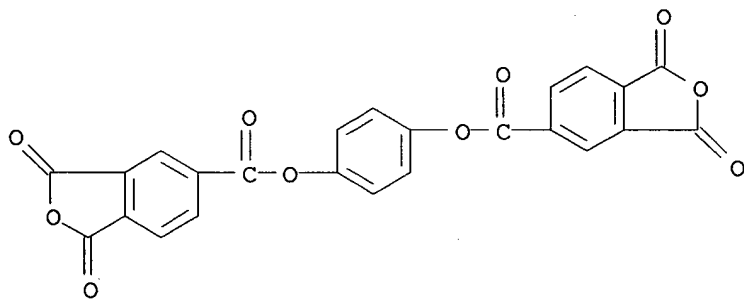
RN 159539-02-3 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene ester, polymer with 1,4-benzenediamine and 4-methyl-1,3-benzenediamine, block (9CI) (CA INDEX NAME)

CM 1

CRN 2770-49-2

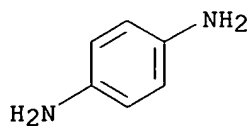
CMF C24 H10 O10



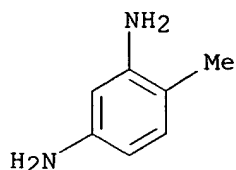
CM 2

CRN 106-50-3

CMF C6 H8 N2



CM 3



L12 ANSWER 17 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1994:535323 CAPLUS

DOCUMENT NUMBER: 121:135323

TITLE: Synthesis and characterization of liquid crystal bismaleimide containing aromatic ester bond

AUTHOR(S): Liu, Xiaobo; Jiang, Luxia; Cai, Xingxian

CORPORATE SOURCE: Dep. Polym. Sci. and Mater., Chengdu Univ. Sci. and Technol., Chengdu, Peop. Rep. China

SOURCE: Gaofenzi Cailiao Kexue Yu Gongcheng (1993), 9(4), 124-8

CODEN: GCKGEI; ISSN: 1000-7555

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB Two liquid crystal bismaleimides containing aromatic ester bond in the backbone were synthesized from maleimidobenzoyl chloride and characterized by FTIR, ¹H-NMR, DTA, DSC and hot-stage polarized light microscopy. With one exception, the bismaleimide could be thermally polymerized. Nematic liquid crystalline behavior was observed in the bismaleimides which could be crosslinked in either the nematic or isotropic phase. Nematic liquid crystalline character could be set in the crosslinked networks by crosslinkable new liquid crystal monomer or prepolymer. A nonequil. phase diagram was used to explain the phase transition of these reactive liquid crystal thermoset materials.

IT 31343-91-6P

RL: SPN (Synthetic preparation); PREP (Preparation)
(liquid-crystalline, preparation and characterization of)

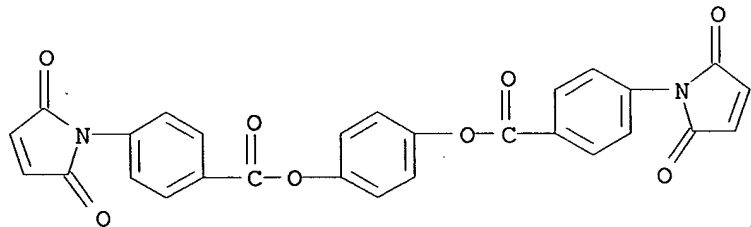
RN 31343-91-6 CAPLUS

CN Benzoic acid, 4-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)-, 1,4-phenylene ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 47798-97-0

CMF C28 H16 N2 O8

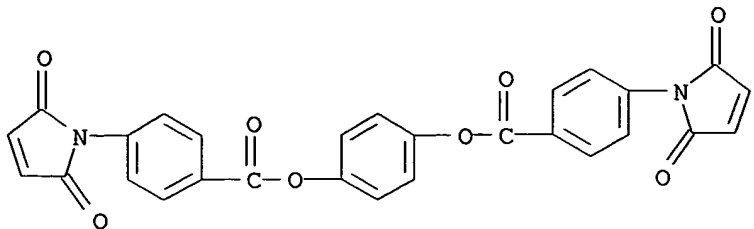


IT 47798-97-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and characterization and polymerization of)

RN 47798-97-0 CAPLUS

CN Benzoic acid, 4-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



L12 ANSWER 18 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1994:511169 CAPLUS

DOCUMENT NUMBER: 121:111169

TITLE: Thermotropic elastomers with poly(oxy-1,4-butanediyl) units in the main chain

AUTHOR(S): Pospiech, Doris; Komber, Hartmut; Voigt, Dieter; Haeussler, Liane; Meyer, Evelin; Schauer, Gottfried; Jehnichen, Dieter; Boehme, Frank

CORPORATE SOURCE: Inst. Polymer Res. Dresden, Dresden, D-01005, Germany

SOURCE: Macromolecular Chemistry and Physics (1994), 195(7), 2633-51

CODEN: MCHPES; ISSN: 1022-1352

DOCUMENT TYPE: Journal

LANGUAGE: English

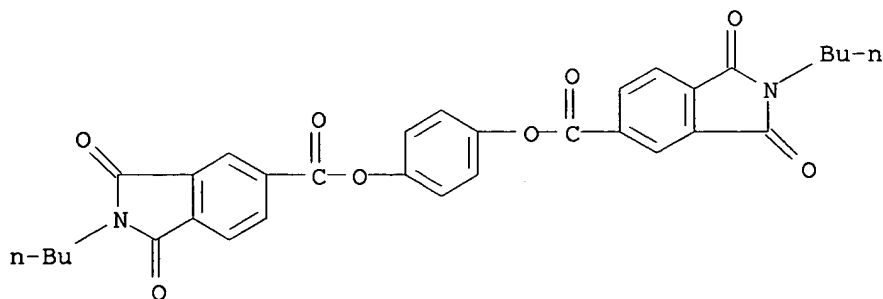
AB The paper describes the synthesis of thermotropic elastomers from trimellititimide-terminated poly(oxy-1,4-butanediyl) [synonyms: poly(tetramethylene ether glycol), PTMG; poly(tetrahydrofuran), poly(THF)] and acetoxy group-terminated rigid blocks. Copolyester imides are formed by transesterification polycondensation in the melt. According to ¹³C NMR investigations, their chain sequence distribution is characterized by a block-like structure in which the preformed rigid units are partially exchanged by transesterification reactions during the melt polycondensation. The degree of transesterification depends on the reaction time. The influence of the length of the flexible PTMG units and of the concentration of rigid units on the phase behavior as well as on the thermal behavior and the dynamic-mech. behavior of the block copolymers is discussed with respect to aromatic model compds.

IT 156972-61-1P 156972-63-3P 156972-64-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as model compound for block polyester-polyimide-polyoxyalkylene elastomers)

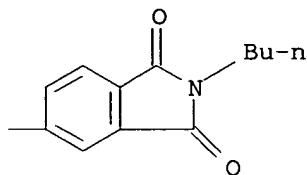
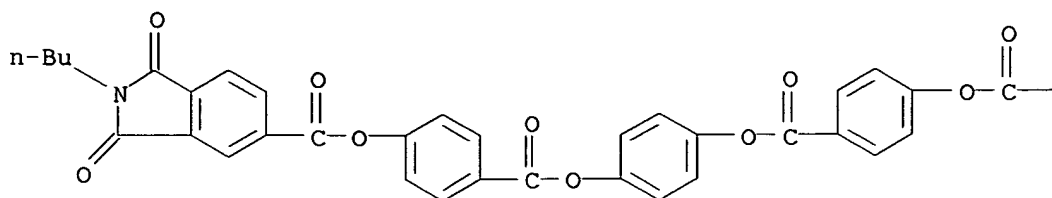
RN 156972-61-1 CAPLUS

CN 1H-Isoindole-5-carboxylic acid, 2-butyl-2,3-dihydro-1,3-dioxo-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



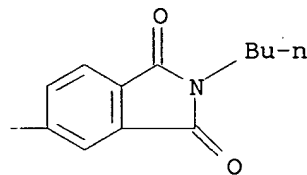
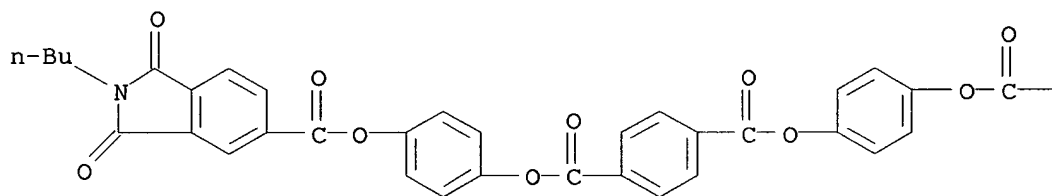
RN 156972-63-3 CAPLUS

CN 1H-Isoindole-5-carboxylic acid, 2-butyl-2,3-dihydro-1,3-dioxo-, 1,4-phenylenebis(oxy-carbonyl-4,1-phenylene) ester (9CI) (CA INDEX NAME)



RN 156972-64-4 CAPLUS

CN 1,4-Benzenedicarboxylic acid, bis[4-[[2-butyl-2,3-dihydro-1,3-dioxo-1H-isoindol-5-yl)carbonyl]oxy]phenyl] ester (9CI) (CA INDEX NAME)

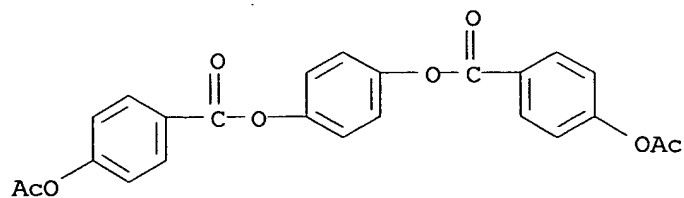


IT 79066-38-9

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with N-butyltrimellitimide)

RN 79066-38-9 CAPLUS

CN Benzoic acid, 4-(acetyloxy)-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



PAGE 1-A

Chemical structure diagram showing a polyether derivative of indole-3-carboxylic acid. The structure includes an indole ring system with a carboxylic acid group (HO_2C) at the 3-position and carbonyl groups ($\text{C}=\text{O}$) at the 1 and 2 positions. The nitrogen atom at the 1-position is connected to a polyether chain: $(\text{CH}_2)_3\text{O}[\text{---}(\text{CH}_2)_4\text{O}\text{---}]_n(\text{CH}_2)_3\text{O}\text{---}$.

 $\text{O}=\text{C}$ C=C1N(C1=O)c2ccccc2C(=O)OCC(=O)Oc1ccc(cc1)C(=O)Oc2ccc(cc2)OC(=O)c3ccc(cc3)OC(=O)CCC(=O)Oc1ccc(cc1)C(=O)O

ACCESSION NUMBER: 1994:271496 CAPLUS
 DOCUMENT NUMBER: 120:271496
 TITLE: Copolymers having a controlled sequence structure
 INVENTOR(S): Choe, Eui Won; Borzo, Marie
 PATENT ASSIGNEE(S): Hoechst Celanese Corp., USA
 SOURCE: Eur. Pat. Appl., 10 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 569930	A2	19931118	EP 1993-107635	19930511 <--
R: BE, DE, ES, FR, GB, IE, IT, LU, NL				
US 5525699	A	19960611	US 1992-884100	19920515 <--
PRIORITY APPLN. INFO.:			US 1992-884100	A 19920515

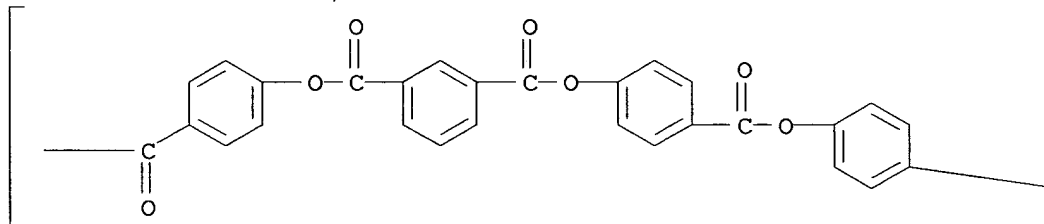
AB A terpolymer or higher consists of a repeating sequence
 [(COAr2Z)nCOAr1CO(ZAR2CO)nY1Ar3Y2]m [Ar1, Ar2, and Ar3 = C6H4, C10H8, or
 C6H4XC6H4 unsubstituted or substituted with ≥1 C1-6alkyl, halogen
 (F, Cl or Br), and Ph; Z, Y1, and Y2 = O, NH, or S; n and m are pos.
 integers; and X = direct bond, O, S, SO2, CO, CPh2, CPhH, CPhMe, CMe2,
 CMeH, CH2, C(CF3)2, or 3,3,5-tri-Me cyclohexyl]. Thus, condensing 1 mol
 isophthaloyl dichloride with 2.1 mol p-hydroxybenzoic acid gave
 di(p-carboxyphenyl)isophthalate m. 290-300°, which was prepared as
 the dichloride m. 204°, and condensed with hydroquinone (1:1) to
 give copolyester showing liquid crystal nematic transition 380°.

IT **106707-11-3P**
 RL: PREP (Preparation)
 (preparation of liquid crystal)

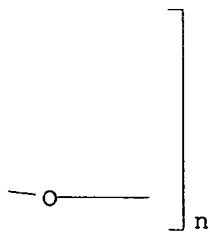
RN 106707-11-3 CAPLUS

CN Poly(oxy-1,4-phenyleneoxycarbonyl-1,4-phenyleneoxycarbonyl-1,3-
 phenylenecarbonyloxy-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



TITLE: Condensation copolymers with sequenced mer structure
 INVENTOR(S): Jaffe, Michael J.; Borzo, Marie; Chenevey, Edward C.;
 Choe, Eui W.; Haider, M. Ishaq; Makhija, Subhash
 PATENT ASSIGNEE(S): Hoechst Celanese Corp., USA
 SOURCE: U.S., 21 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5256760	A	19931026	US 1992-884965	19920515 <--

PRIORITY APPLN. INFO.: US 1992-884965 19920515

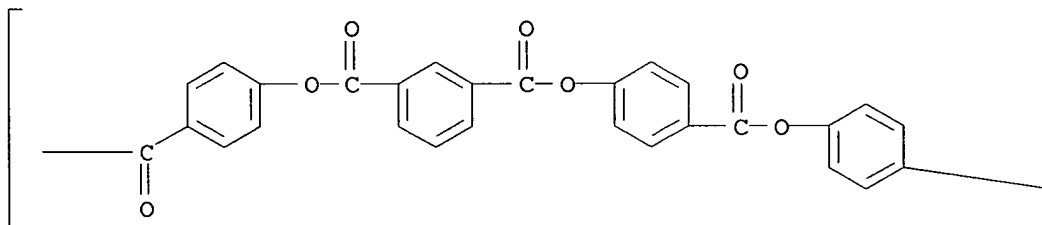
AB The title polymers (especially polyesters) are prepared from first monomers (e.g. diacid, diol, diamine, hydroxy acid, **aminophenol** monomers containing specified aromatic groups) and monomers reactive with the first monomers by polymerizing so that the first monomer and comonomers occur in a non-random sequence in the polymer. Di(p-chlorocarbonylphenyl)isophthalate was prepared from p-hydroxybenzoic acid and isophthaloyl chloride and subsequent chlorination, then polymerized with hydroquinone, phenylenediamine, etc. to give polymers.

IT **106707-11-3P**
 RL: PREP (Preparation)
 (preparation of, with ordered sequence)

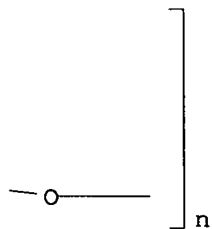
RN 106707-11-3 CAPLUS

CN Poly(oxy-1,4-phenyleneoxycarbonyl-1,4-phenyleneoxycarbonyl-1,3-phenylenecarbonyloxy-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)

PAGE 1-A

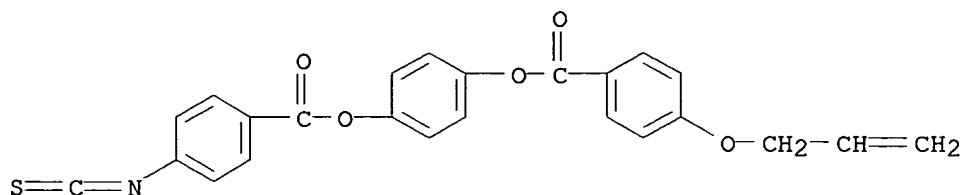


PAGE 1-B

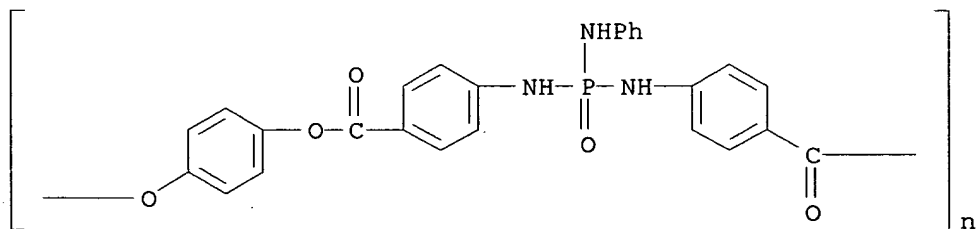


L12 ANSWER 21 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1993:517864 CAPLUS
 DOCUMENT NUMBER: 119:117864
 TITLE: Synthesis of monomers for **polymeric** liquid crystal with new type of side chain
 AUTHOR(S): Wei, Xiuzhen; Geng, Tongmou
 CORPORATE SOURCE: Chem. Eng. Mater. Coll., Beijing Inst. Technol., Beijing, 100081, Peop. Rep. China
 SOURCE: Youji Huaxue (1993), 13(3), 272-6
 CODEN: YCHHDX; ISSN: 0253-2786

DOCUMENT TYPE: Journal
 LANGUAGE: Chinese
 AB Four liquid-crystalline aromatic ester monomers containing allyloxy and NCS terminal group were prepared and characterized by IR, DSC, hot-stage polarization microscope, and elemental anal. These monomers have a wide range of mesomorphic states and high thermal stability.
 IT **149731-98-6P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (liquid-crystalline, monomers, preparation and characterization of)
 RN 149731-98-6 CAPLUS
 CN Benzoic acid, 4-isothiocyanato-, 4-[[4-(2-propenyloxy)benzoyl]oxy]phenyl ester (9CI) (CA INDEX NAME)



L12 ANSWER 22 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1992:129775 CAPLUS
 DOCUMENT NUMBER: 116:129775
 TITLE: Novel flame retardant polyphosphoramidate esters
 AUTHOR(S): Kannan, P.; Kishore, K.
 CORPORATE SOURCE: Dep. Inorg. Phys. Chem., Indian Inst. Sci., Bangalore, 560 012; India
 SOURCE: Polymer (1992), 33(2), 418-22
 CODEN: POLMAG; ISSN: 0032-3861
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Several polyphosphoramidate esters were prepared by solution polycondensation of N,N'-bis(p-chloroformylphenyl)-N''-phenylphosphoric triamide with various aromatic diols. The polymers were characterized by IR, and 1H-, 13C-, and 31P-NMR spectroscopies and by their inherent viscosity. Thermal stability and flammability data indicated that this class of polymers could be used for potent heat-resistant and fire-retardant applications.
 IT **135852-13-0P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and characterization of fire- and heat-resistant)
 RN 135852-13-0 CAPLUS
 CN Poly[oxy-1,4-phenyleneoxycarbonyl-1,4-phenyleneimino[(phenylamino)phosphinylidene]imino-1,4-phenylenecarbonyl] (9CI) (CA INDEX NAME)



L12 ANSWER 23 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1987:487347 CAPLUS
 DOCUMENT NUMBER: 107:87347
 TITLE: Polymers showing liquid crystalline phases
 INVENTOR(S): Finkelmann, Heino; Hessel, Friedrich; Eidenschink, Rudolf; Krause, Joachim
 PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Fed. Rep. Ger.

SOURCE: Ger. Offen., 12 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3534646	A1	19870402	DE 1985-3534646	19850928 <--
EP 220463	A2	19870506	EP 1986-112830	19860917 <--
EP 220463	A3	19890524		
EP 220463	B1	19920102		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
AT 71131	E	19920115	AT 1986-112830	19860917 <--
FI 8603893	A	19870329	FI 1986-3893	19860926 <--
JP 62074987	A2	19870406	JP 1986-226361	19860926 <--
CA 1272342	A1	19900731	CA 1986-519143	19860926 <--
US 5190689	A	19930302	US 1991-746219	19910816 <--

PRIORITY APPLN. INFO.:

DE 1985-3534646	A	19850928
EP 1986-112830	A	19860917
US 1986-912461	B1	19860929
US 1990-566794	B1	19900813

AB Polymers showing a liquid crystal phase contain laterally bonded mesogenic groups in the polymer backbone. These polymers are useful as substrates in electronics for the fiber- and film techniques, for amplitude and frequency modulation of laser beams, and for optical data recording. 2-(11-Methacryloyloxyundecyl)hydroquinone bis(4-hexyloxyphenyl) ester, prepared by esterifying 2-(11-methacryloyloxyundecyl) hydroquinone with 4-hexyloxybenzoyl chloride, was polymerized in C6H6 in the presence of azobisisobutyronitrile to give a polymer showing a stable liquid crystalline phase.

IT **103467-66-9P 103467-68-1P**

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation and liquid crystal properties of)

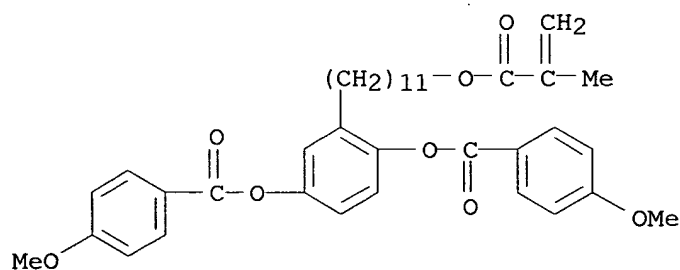
RN 103467-66-9 CAPLUS

CN Benzoic acid, 4-methoxy-, 2-[11-[(2-methyl-1-oxo-2-propenyl)oxy]undecyl]-1,4-phenylene ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 103467-65-8

CMF C37 H44 O8



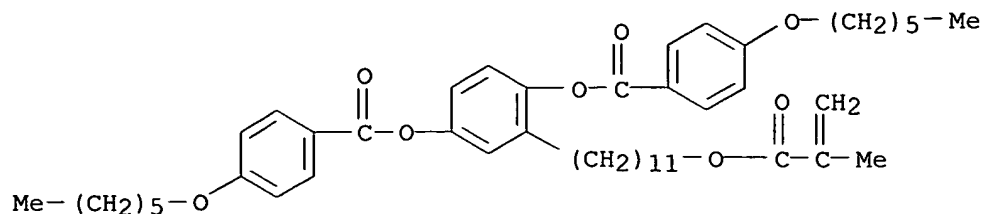
RN 103467-68-1 CAPLUS

CN Benzoic acid, 4-(hexyloxy)-, 2-[11-[(2-methyl-1-oxo-2-propenyl)oxy]undecyl]-1,4-phenylene ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 103467-67-0

CMF C47 H64 O8

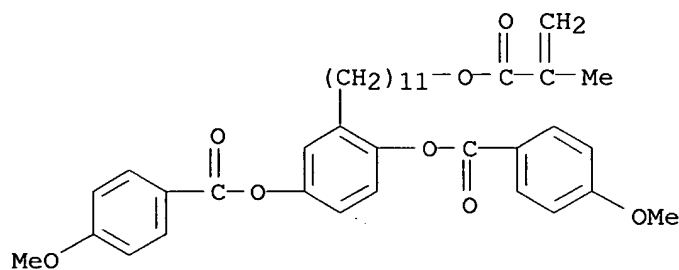


IT 103467-65-8P 103467-67-0P

RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation and polymerization of)

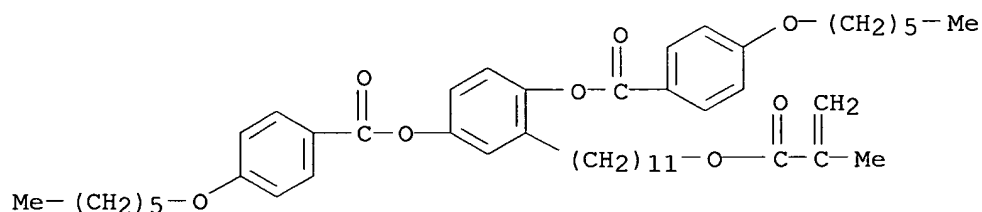
RN 103467-65-8 CAPLUS

CN Benzoic acid, 4-methoxy-, 2-[11-[(2-methyl-1-oxo-2-propenyl)oxy]undecyl]-1,4-phenylene ester (9CI) (CA INDEX NAME)



RN 103467-67-0 CAPLUS

CN Benzoic acid, 4-(hexyloxy)-, 2-[11-[(2-methyl-1-oxo-2-propenyl)oxy]undecyl]-1,4-phenylene ester (9CI) (CA INDEX NAME)



L12 ANSWER 24 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:423916 CAPLUS

DOCUMENT NUMBER: 107:23916

TITLE: Manufacture of polyesters, polyamides and polyketones

PATENT ASSIGNEE(S): Dow Chemical Co., USA

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62007715	A2	19870114	JP 1986-127390	19860603 <--
CA 1272840	A1	19900814	CA 1986-510619	19860602 <--
AU 8658293	A1	19870108	AU 1986-58293	19860603 <--
AU 579734	B2	19881208		
EP 215543	A1	19870325	EP 1986-304225	19860603 <--
EP 215543	B1	19900411		
R: DE, FR, GB, IT, NL, SE				
ZA 8604125	A	19880224	ZA 1986-4125	19860603 <--
PRIORITY APPLN. INFO.:			US 1985-740451	A 19850603
AB Title polymers or polymers containing ≥2 ester, amide, and/or ketone				

functions are prepared by reacting ≥ 1 trichloromethyl ketone group-containing compound with ≥ 1 hydroxy, **amino** or acyl group-containing compound. Thus, 23.02 g bis-4,4'-(trichloroacetyl)diphenyl ether and 11.4 g bisphenol-A reacted in 50 mL THF containing 0.192 g NaH at 50° overnight gave 20.72 g polyester with weight-average mol. weight 34,287.

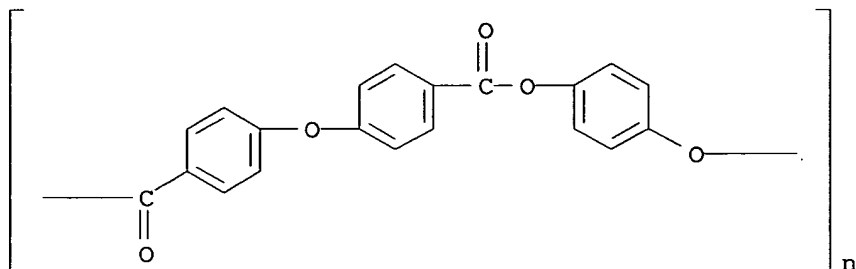
IT 31760-41-5P 108819-82-5P

RL: PREP (Preparation)

(preparation of)

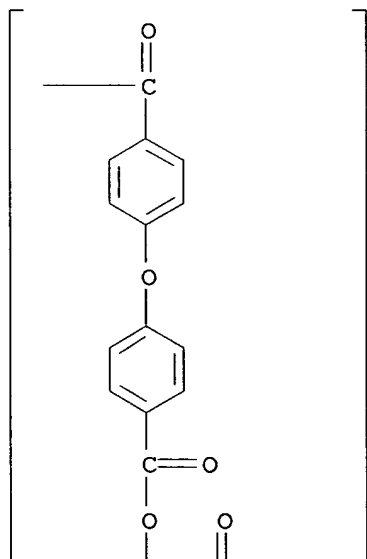
RN 31760-41-5 CAPLUS

CN Poly(oxy-1,4-phenyleneoxycarbonyl-1,4-phenyleneoxy-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)

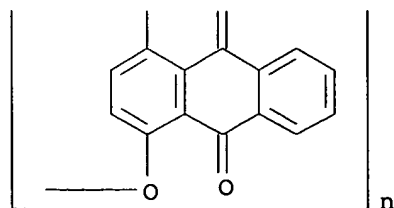


RN 108819-82-5 CAPLUS

CN Poly[oxy(9,10-dihydro-9,10-dioxo-1,4-anthracenediyl)oxycarbonyl-1,4-phenyleneoxy-1,4-phenylenecarbonyl] (9CI) (CA INDEX NAME)



PAGE 1-A



PAGE 2-A

ACCESSION NUMBER: 1987:85281 CAPLUS
 DOCUMENT NUMBER: 106:85281
 TITLE: Phthalocyanine polymers
 INVENTOR(S): Achar, Bappalige N.; Fohlen, George M.; Parker, John A.
 PATENT ASSIGNEE(S): United States National Aeronautics and Space Administration, USA
 SOURCE: U. S. Pat. Appl., 22 pp.
 CODEN: XAXXAV
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 754362	A0	19860703	US 1985-754362	19850712 <--
US 4649189	A	19870310		
US 565482	A0	19840525	US 1983-565482	19831222 <--

PRIORITY APPLN. INFO.:

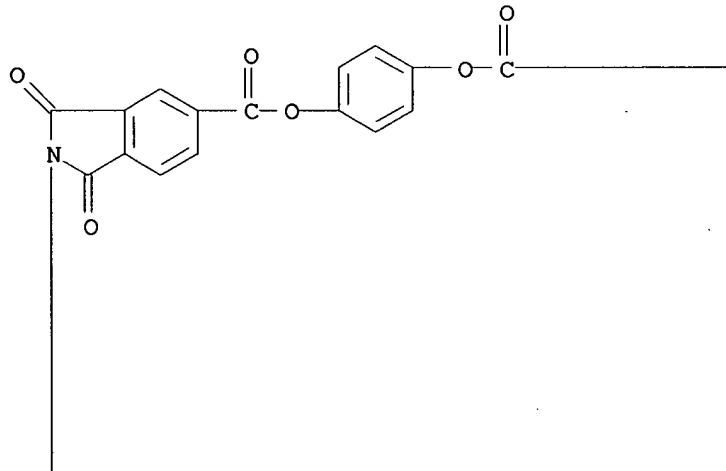
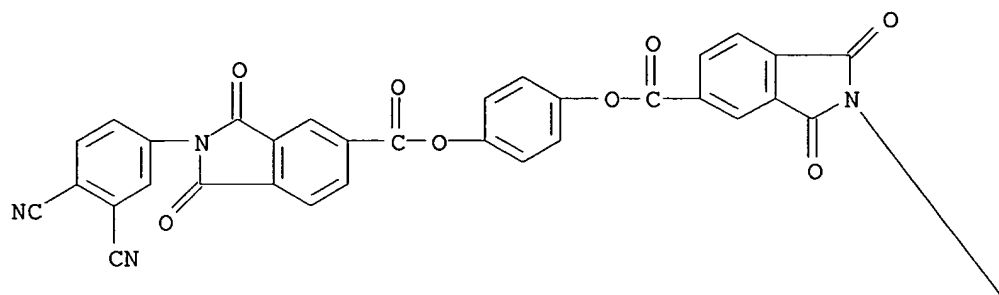
AB Imide-linked bisphthalonitrile compds. are prepared by combining a dicyano aromatic diamine and an organic dianhydride to give an amic acid-linked bisphthalonitrile, which is dehydrocyclized. The product is polymerized by heating it alone or in the presence of a metal powder or salt to give a phthalocyanine polymer, which has increased fire resistance, toughness, and resistance to moisture, and is useful in coatings, laminates and moldings for secondary structures in air- and spacecraft. Thus, 4 g 4-**aminophthalonitrile** was dissolved in 35 mL Me₂SO (under N₂) and mixed (0.5 h) with 4.502 g benzophenonetetracarboxylic dianhydride. The solid (solvent removed) was heated (165°) in vacuum for 1 h. Then 2 g of the product (m.p. 272°) was finely ground and mixed with 0.173 g CuCl and polymerized (under N₂) at 280° for 1.5 h.

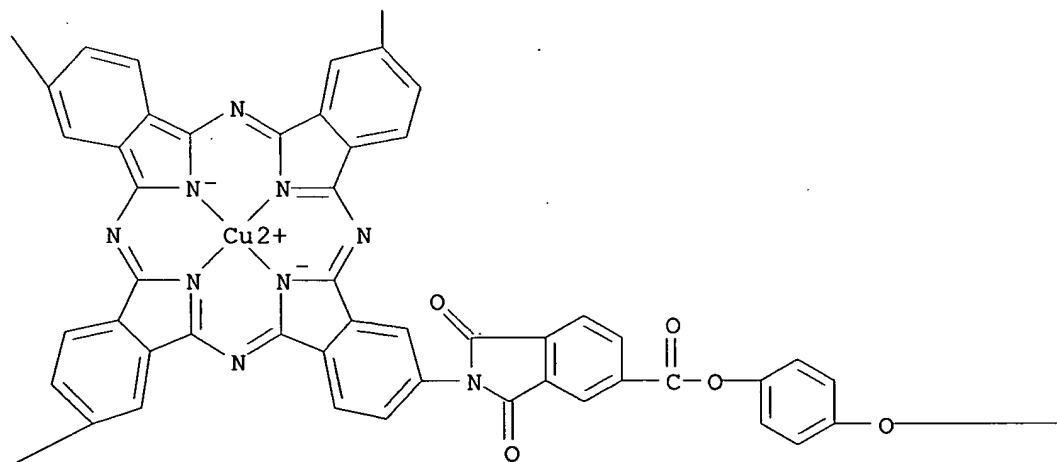
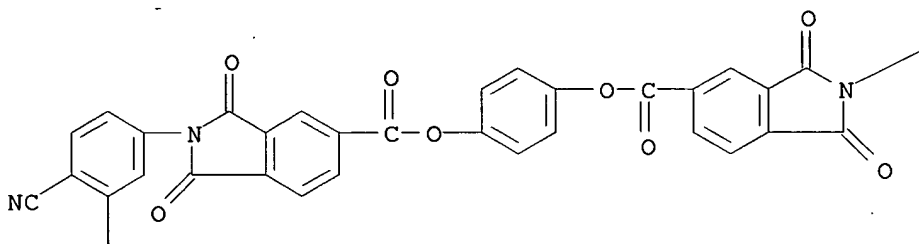
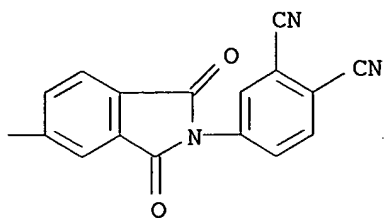
IT 106779-91-3P

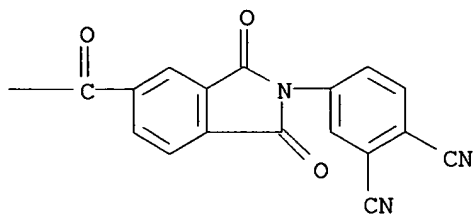
RL: IMF (Industrial manufacture); PREP (Preparation)
 (manufacture of, for coatings, laminates and moldings in air- and spacecraft)

RN 106779-91-3 CAPLUS

CN Copper, [[tetrakis[4-[[[2-(3,4-dicyanophenyl)-2,3-dihydro-1,3-dioxo-1H-isoindol-5-yl]carbonyl]oxy]phenyl] 2,2',2'',2'''-(29H,31H-phthalocyanine-2,9,16,23-tetrayl)tetrakis[2,3-dihydro-1,3-dioxo-1H-isoindole-5-carboxylato]](2-)-N29,N30,N31,N32]-, (SP-4-1)-(9CI) (CA INDEX NAME)



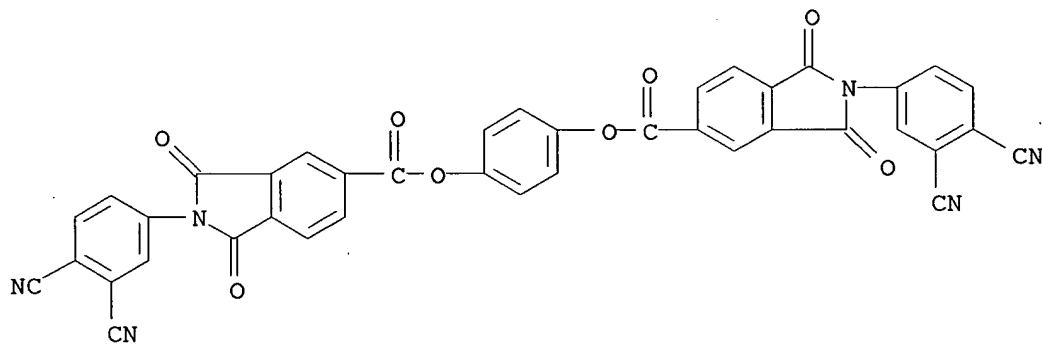




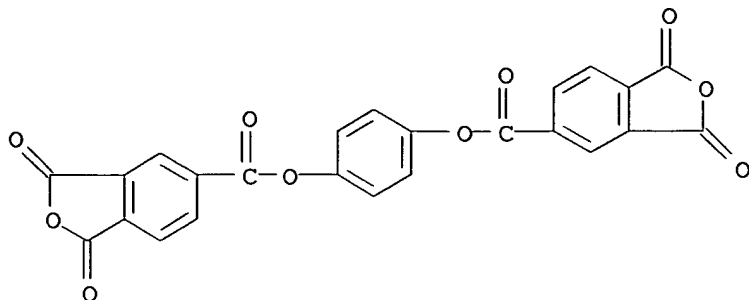
PAGE 3-A



IT **92602-01-2P**
 RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and polymerization of)
 RN 92602-01-2 CAPLUS
 CN 1H-Isoindole-5-carboxylic acid, 2-(3,4-dicyanophenyl)-2,3-dihydro-1,3-dioxo-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



IT **2770-49-2P**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and reaction with **aminophthalonitrile**)
 RN 2770-49-2 CAPLUS
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene
 ester (9CI) (CA INDEX NAME)



L12 ANSWER 26 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1985:454538 CAPLUS

DOCUMENT NUMBER: 103:54538

TITLE: Synthesis and characterization of the new thermosetting monomers and phthalocyanine polymers with ester-imide linkages

AUTHOR(S): Achar, B. N.; Fohlen, G. M.; Parker, J. A.

CORPORATE SOURCE: Dep. Post-Grad. Stud. Res. Chem., Mysore, 570006, India

SOURCE: Journal of Polymer Science, Polymer Chemistry Edition (1985), 23(6), 1677-86
CODEN: JPLCAT; ISSN: 0449-296X

DOCUMENT TYPE: Journal

LANGUAGE: English

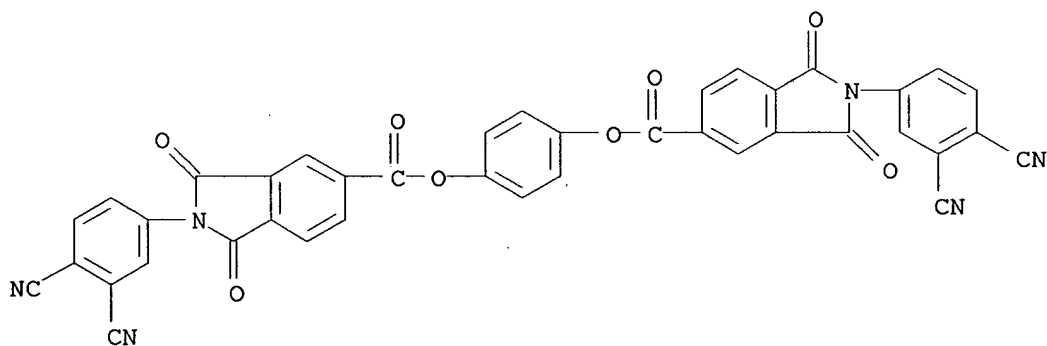
AB Two bisphthalonitrile derivs. with ester-imide linkages were prepared and polymerized with CuCl. Optimum conditions for the synthesis and characterization of the bisphthalic anhydrides, bisphthalonitriles, and polymers are developed using IR spectra, DSC, dynamic thermogravimetric anal., and mass spectra. The polymers showed good thermal stability and chemical inertness. The polymers showed char yield of 50% at 800° in N atmospheric. These thermosetting phthalocyanine polymers are expected to be useful in various applications such as the production of molded articles and laminates.

IT 92602-01-2DP, copper complexes, polymers

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and thermal properties of)

RN 92602-01-2 CAPLUS

CN 1H-Isoindole-5-carboxylic acid, 2-(3,4-dicyanophenyl)-2,3-dihydro-1,3-dioxo-, 1,4-phenylene ester (9CI) (CA INDEX NAME)

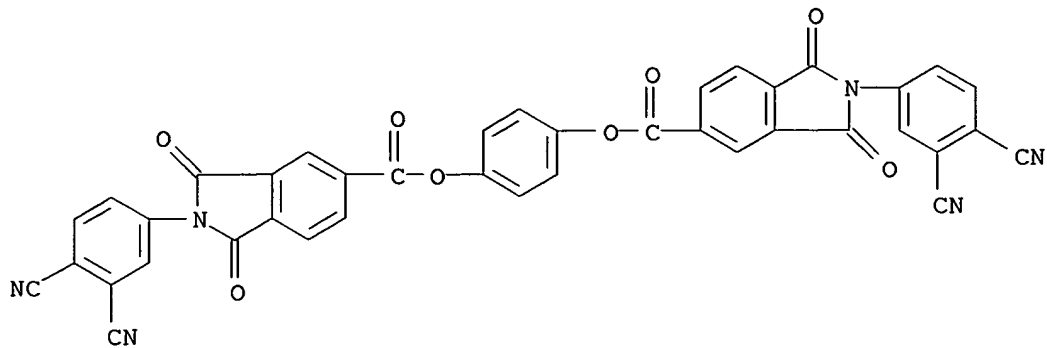


IT 92602-01-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of and polymerization of)

RN 92602-01-2 CAPLUS

CN 1H-Isoindole-5-carboxylic acid, 2-(3,4-dicyanophenyl)-2,3-dihydro-1,3-dioxo-, 1,4-phenylene ester (9CI) (CA INDEX NAME)

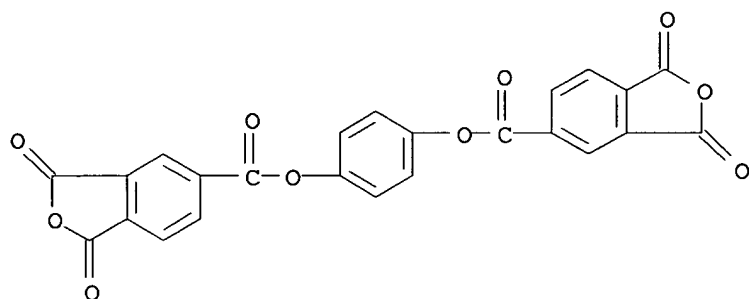


IT 2770-49-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with **aminophthalonitrile**)

RN 2770-49-2 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene
ester (9CI) (CA INDEX NAME)



L12 ANSWER 27 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1985:7296 CAPLUS

DOCUMENT NUMBER: 102:7296

TITLE: Aromatic poly(ester amides)

PATENT ASSIGNEE(S): Toshiba Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

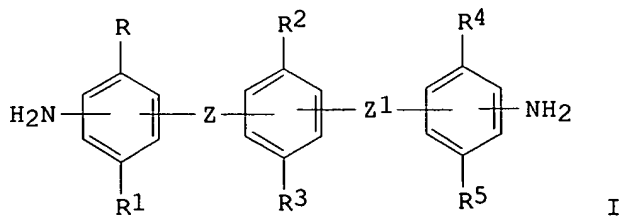
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 59149928	A2	19840828	JP 1983-22789	19830216 <--
PRIORITY APPLN. INFO.:			JP 1983-22789	19830216

GI



AB High-mol.-weight, heat-resistant poly(ester amides) were prepared with good

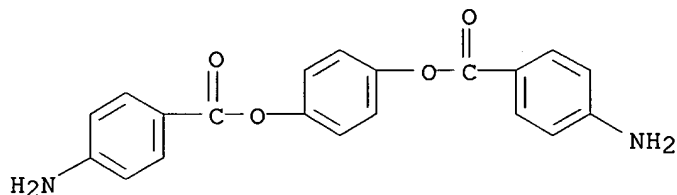
reproducibility by polycondensation of I (Z, Z1 = CO2, O2C; R1-R5 = H, Cl-5 alkyl, Cl, Br) with aromatic dicarboxylic acids or acid halides. Thus, p-nitrophenol [100-02-7] was esterified with isophthaloyl chloride (II) [99-63-8] to give bis(4-nitrophenyl) isophthalate [19312-30-2] which was reduced (Zn/AcOH) to bis(4-aminophenyl) isophthalate [16996-47-7] and then dissolved in tetramethylene sulfone, treated with Et3N then with II at 5°, and stirred at that temperature for 30 min and then at room temperature for 1 h to give a yellow polymer [31494-99-2] in 98% yield with intrinsic viscosity (0.5 g/L, in N-methyl-2-pyrrolidone, 30°) 2.17, m.p. 265°, and 5%-weight-loss temperature 391°.

IT **22095-98-3P**

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manufacture and polymerization of)

RN 22095-98-3 CAPLUS

CN 1,4-Benzenediol, bis(4-aminobenzoate) (9CI) (CA INDEX NAME)

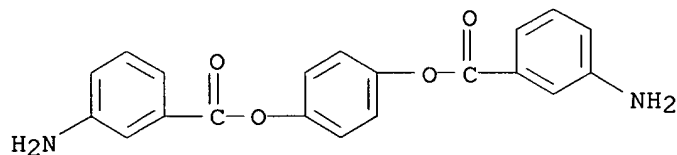


IT **22095-97-2P**

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manufacture and polymerization of, with isophthaloyl chloride and terephthaloyl chloride)

RN 22095-97-2 CAPLUS

CN 1,4-Benzenediol, bis(3-aminobenzoate) (9CI) (CA INDEX NAME)

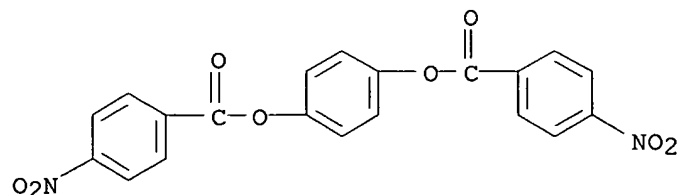


IT **24706-98-7P 93675-49-1P**

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manufacture and reduction of)

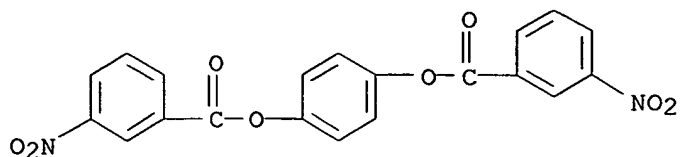
RN 24706-98-7 CAPLUS

CN 1,4-Benzenediol, bis(4-nitrobenzoate) (9CI) (CA INDEX NAME)



RN 93675-49-1 CAPLUS

CN 1,4-Benzenediol, bis(3-nitrobenzoate) (9CI) (CA INDEX NAME)



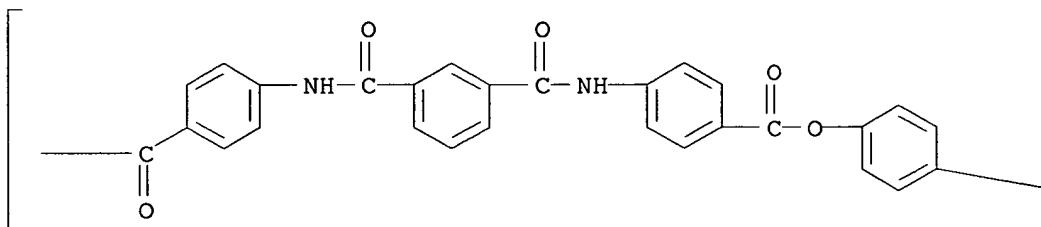
IT 93580-58-6P 93580-67-7P 93581-08-9P
 93581-09-0P 93581-10-3P 93581-11-4P
 93610-37-8P

RL: IMF (Industrial manufacture); PREP (Preparation)
 (manufacture of heat-resistant, high-mol.-weight)

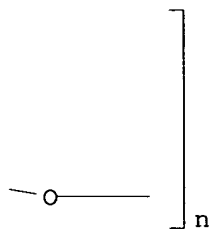
RN 93580-58-6 CAPLUS

CN Poly(oxy-1,4-phenyleneoxycarbonyl-1,4-phenyleneiminocarbonyl-1,3-phenylenecarbonylimino-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)

PAGE 1-A



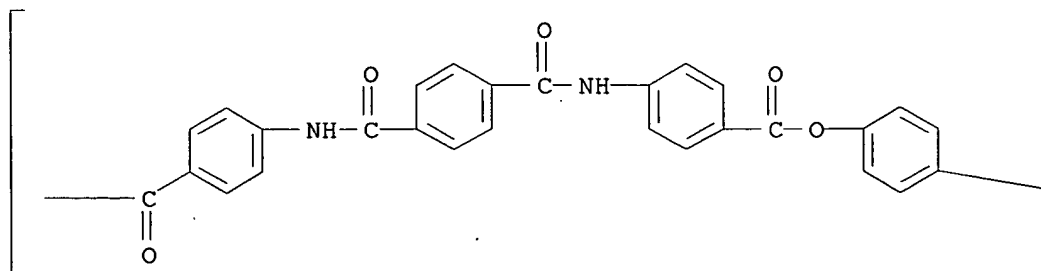
PAGE 1-B

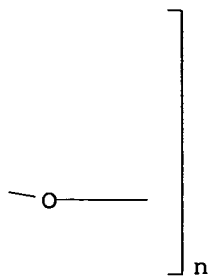


RN 93580-67-7 CAPLUS

CN Poly(oxy-1,4-phenyleneoxycarbonyl-1,4-phenyleneiminocarbonyl-1,4-phenylenecarbonylimino-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)

PAGE 1-A





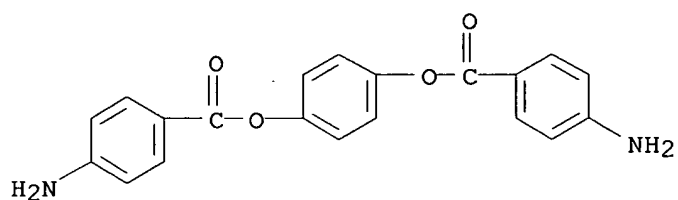
RN 93581-08-9 CAPLUS

CN 1,4-Benzenedicarbonyl dichloride, polymer with 1,4-phenylene bis(4-aminobenzoate) (9CI) (CA INDEX NAME)

CM 1

CRN 22095-98-3

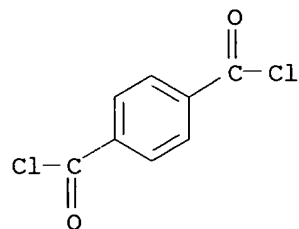
CMF C20 H16 N2 O4



CM 2

CRN 100-20-9

CMF C8 H4 Cl2 O2



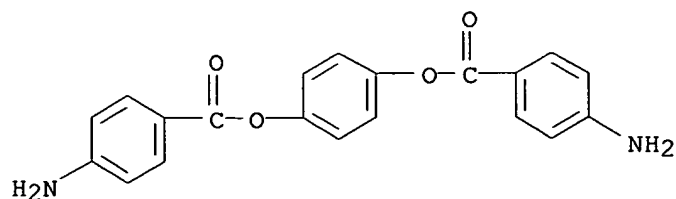
RN 93581-09-0 CAPLUS

CN 1,3-Benzenedicarbonyl dichloride, polymer with 1,4-phenylene bis(4-aminobenzoate) (9CI) (CA INDEX NAME)

CM 1

CRN 22095-98-3

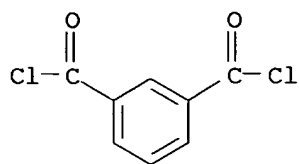
CMF C20 H16 N2 O4



CM 2

CRN 99-63-8

CMF C8 H4 Cl2 O2



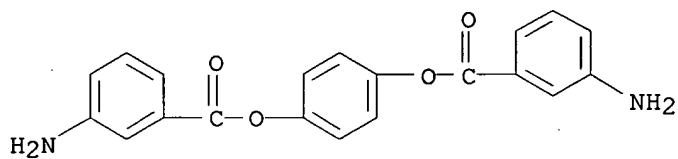
RN 93581-10-3 CAPLUS

CN 1,3-Benzenedicarbonyl dichloride, polymer with 1,4-benzenedicarbonyl dichloride and 1,4-phenylene bis(3-aminobenzoate) (9CI) (CA INDEX NAME)

CM 1

CRN 22095-97-2

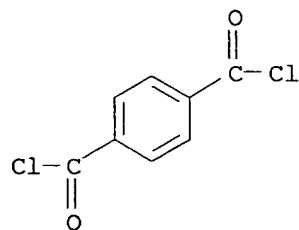
CMF C20 H16 N2 O4



CM 2

CRN 100-20-9

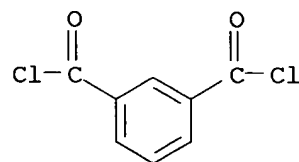
CMF C8 H4 Cl2 O2



CM 3

CRN 99-63-8

CMF C8 H4 Cl2 O2



RN 93581-11-4 CAPLUS

CN 1,3-Benzenedicarbonyl dichloride, polymer with 1,4-phenylene

PATENT ASSIGNEE(S): National Research Council, USA; United States National

SOURCE:

Aeronautics and Space Administration

U. S. Pat. Appl., 19 pp.

CODEN: XAXXAV

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 565482	A0	19840525	US 1983-565482	19831222 <--
US 754362	A0	19860703	US 1985-754362	19850712 <--
US 4649189	A	19870310		

PRIORITY APPLN. INFO.:

US 1983-565482

19831222

AB Phthalocyanine group-containing polymers having good thermal stability are prepared by combining a dicyanoarom. amine and an organic dianhydride to give an amic acid-linked bisphthalonitrile compound, dehydrocyclizing to give an imide-linked bisphthalonitrile compound, and heating alone or in the presence of a metal salt or compound. Thus, 4.0 g 4-aminophthalonitrile [56765-79-8] was dissolved in 35 mL DMSO, treated with 4.502 g benzophenonetetracarboxylic dianhydride [2421-28-5], stirred 0.5 h, heated to 75° to remove solvent, and heated 1 h at 165° to give imide-linked bisphthalonitrile compound (I) [84461-03-0]. I (2.0 g) and 0.173 g CuCl were ground, ball-milled, and heated 1.5 h at 280° to give bluish-black polymers.

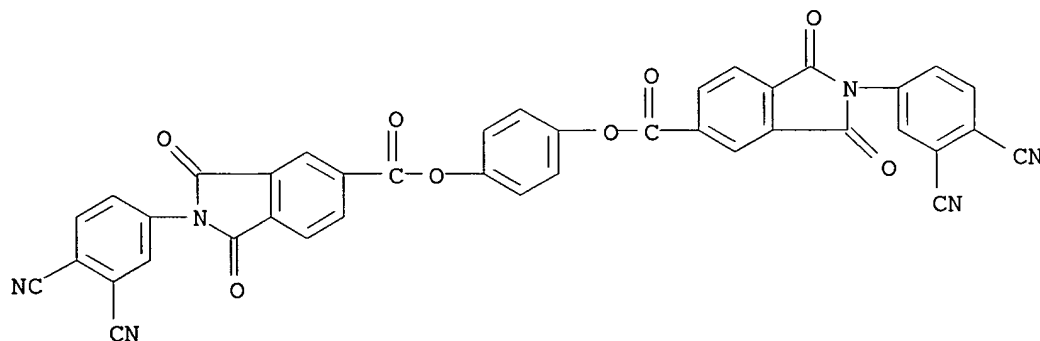
IT 92602-01-2DP, polymers

RL: PREP (Preparation)

(copper phthalocyanine group-containing, preparation of)

RN 92602-01-2 CAPLUS

CN 1H-Isoindole-5-carboxylic acid, 2-(3,4-dicyanophenyl)-2,3-dihydro-1,3-dioxo-, 1,4-phenylene ester (9CI) (CA INDEX NAME)

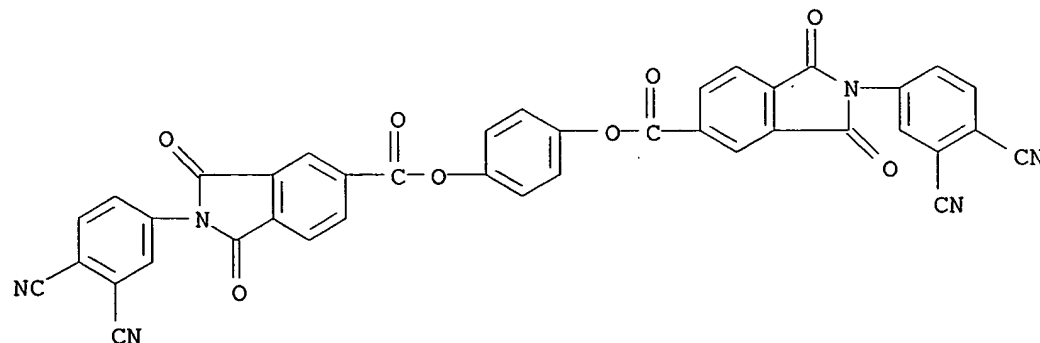


IT 92602-01-2P

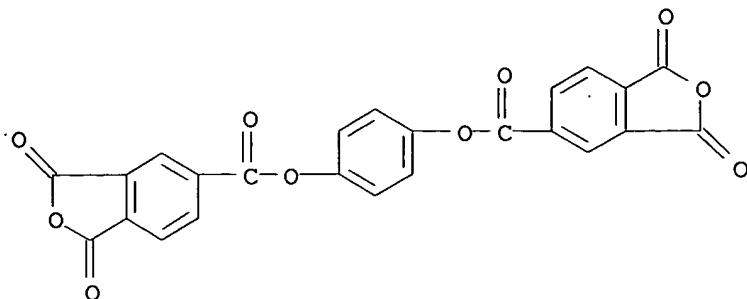
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation and polymerization of)

RN 92602-01-2 CAPLUS

CN 1H-Isoindole-5-carboxylic acid, 2-(3,4-dicyanophenyl)-2,3-dihydro-1,3-dioxo-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



IT 2770-49-2P
 RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and reaction of, with **aminophthalonitrile**)
 RN 2770-49-2 CAPLUS
 CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene
 ester (9CI) (CA INDEX NAME)



L12 ANSWER 29 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1982:52743 CAPLUS

DOCUMENT NUMBER: 96:52743

TITLE: Study of the reactivity of anhydride and **amino** groups in polyacylation of aromatic diamines with tetracarboxylic acid anhydrides

AUTHOR(S): Kudryavtsev, V. V.; Koton, M. M.; Svetlichnyi, V. M.; Zubkov, V. A.

CORPORATE SOURCE: Inst. High Mol. Combd., Leningrad, USSR

SOURCE: Plaste und Kautschuk (1981), 28(11), 601-6

CODEN: PLKAAM; ISSN: 0048-4350

DOCUMENT TYPE: Journal

LANGUAGE: German

AB An evaluation of the effect of the chemical constitution of the diamines and dianhydrides on the acylation rate constant and the isomer composition of the corresponding polyamic acid indicated that because the charge transport energy depends on the chemical constitution, the parameter ϵ_0 , the energy of the upper occupied shell, and the parameters ϵ_{uf} , the energy of the lower free shell, and f_r , the limiting d. of electrons in the CO carbon atom, can be used as an index of the reactivity of amines and aromatic anhydrides, resp. The relation between the electron affinity of the dianhydrides and the ionization potential of the diamines and the reactivity of the compds. is confirmed.

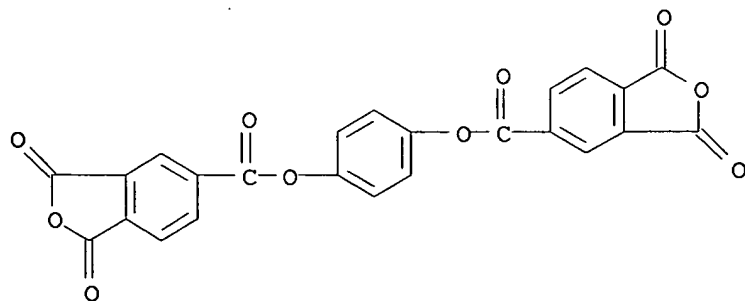
IT 2770-49-2

RL: PRP (Properties)

(electron affinity of, rate of diamine polyacylation in relation to)

RN 2770-49-2 CAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, 1,4-phenylene
 ester (9CI) (CA INDEX NAME)



ACCESSION NUMBER: 1978:580408 CAPLUS

DOCUMENT NUMBER: 89:180408

TITLE: Studies of phosphorus-containing polymers. XIII.

Preparation of polyester-imides from
phosphorus-containing bisimide carboxylic acids and
aromatic diacetoxy compoundsAUTHOR(S): Sato, Moriyuki; Iijima, Tadatoshi; Uchida, Takao;
Yokoyama, Masaaki

CORPORATE SOURCE: Dep. Ind. Chem., Kogakuin Univ., Tokyo, Japan

SOURCE: Kobunshi Ronbunshu (1978), 35(8), 501-7

CODEN: KBRBA3; ISSN: 0386-2186

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

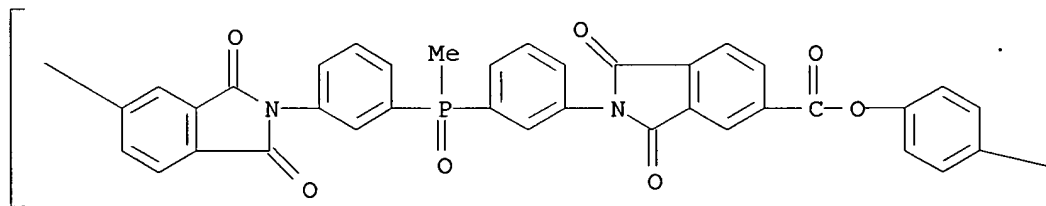
AB Alkylbis[3-(4-carboxyphthalimido)phenyl]phosphine oxides (I, alkyl = Me, Bu) were prepared from alkylbis(3-**aminophenyl**)phosphine oxides (II) and trimellitic anhydride [552-30-7], and P-containing poly(ester imides) (III) were synthesized by transesterification of aromatic diacetoxy compds. (e.g., 4,4'-diacetoxybiphenyl) with I in the presence of, e.g., Zn(OAc)₂ at 315-25° in 78-98% yields. Thermal anal. showed that III degraded in 2 steps in air, but degraded in 1 step in N with activation energies of 33-80 kcal/mol. Most of the absorption bands in the IR spectra of III disappeared after thermal decomposition of III at >600°. III with a naphthalene ring in the main chain have good thermal stability. All III prepared were self-extinguishing on removal from a flame. Also prepared for comparison were the corresponding poly(ester imides) and intermediates based on 3,3'-diaminobenzophenone instead of II.

IT **68068-84-8P 68068-93-9P 68080-54-6P**RL: SPN (Synthetic preparation); PREP (Preparation)
(fire-resistant, preparation of)

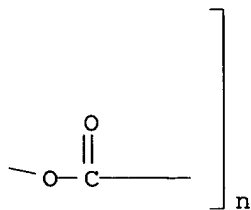
RN 68068-84-8 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,3-phenylene(methylphosphinylidene)-1,3-phenylene(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyloxy-1,4-phenyleneoxycarbonyl] (9CI) (CA INDEX NAME)

PAGE 1-A

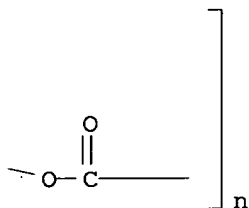
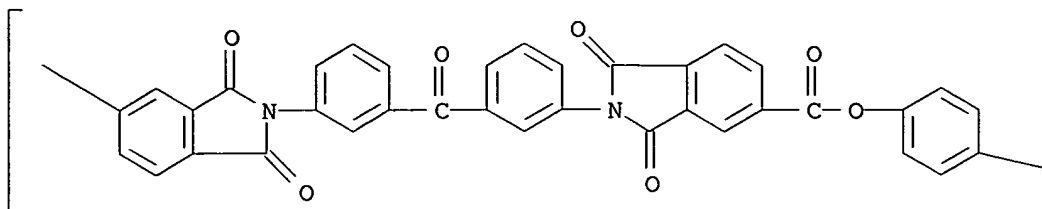


PAGE 1-B

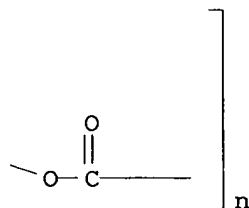
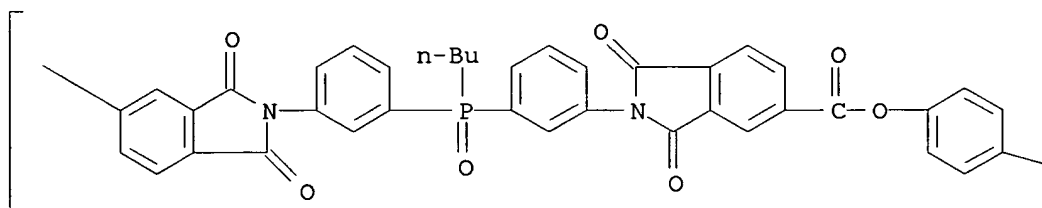


RN 68068-93-9 CAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,3-phenylenecarbonyl-1,3-phenylene(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyloxy-1,4-phenyleneoxycarbonyl] (9CI) (CA INDEX NAME)



RN	68080-54-6	CAPLUS
CN	Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,3-phenylene(butylphosphinylidene)-1,3-phenylene(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyloxy-1,4-phenyleneoxycarbonyl] (9CI) (CA INDEX NAME)	



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L12 ANSWER 31 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1975:141003 CAPLUS
DOCUMENT NUMBER: 82:141003
TITLE: Bisimide compositions and polymers
INVENTOR(S): Holub, Fred F.; Emerick, Carl M.
PATENT ASSIGNEE(S): General Electric Co.
SOURCE: Can., 40 pp.
CODEN: CAXXA4
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:
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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 959494	A2	19741217	CA 1973-171115	19730507 <--
PRIORITY APPLN. INFO.:			CA 1970-80644	A3 19700421

GI For diagram(s), see printed CA Issue.

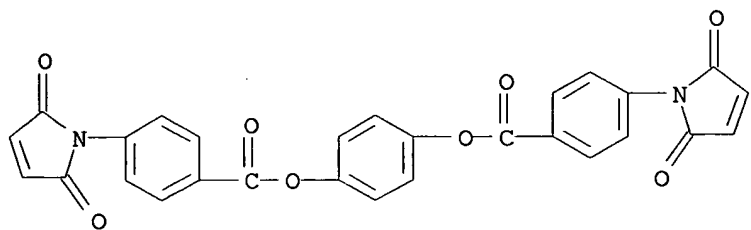
AB Nine aromatic bisimides based on imides of maleic acid, tetrahydrophthalic acid, endo-methylenetetrahydrophthalic acid, or 1,4,5,6,7,7-hexachloro-5-bicyclo[2.2.1]heptene-2,3-dicarboxylic acid were manufactured and polymerized to give thermosetting materials. Thus, bis(3,5-dimethyl-4-hydroxyphenyl) sulfone [13288-70-5] reacted with p-maleimidobenzoyl chloride [29305-46-2] in tetrachloroethane to give maleimido sulfone (I) [29305-24-6] which was cured in the presence of dicumyl peroxide to give polymer [31343-92-7] film with cut-through temperature 370°.

IT **47798-97-0P**

RL: PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
(preparation and polymerization of)

RN 47798-97-0 CAPLUS

CN Benzoic acid, 4-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



IT **31343-91-6**

RL: USES (Uses)
(tough)

RN 31343-91-6 CAPLUS

CN Benzoic acid, 4-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)-, 1,4-phenylene ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 47798-97-0

CMF C28 H16 N2 O8

